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ORIGINAL ARTICLES.

THE SCOPE OF DERMATOLOGY.

Chairman's Address read in Section of Dermatology and Syphilography, at the Forty-fourth Annual Meeting of the American Medical Association.

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On the occasion of the last annual meeting of this Section of the ASSOCIATION, the honor to preside over the deliberations of the present meeting was conferred upon me. It affords me pleasure to greet you as members of the ASSOCIATION, and especially as attendants upon the work of this Section, whose importance I believe must be more fully recognized by the profession with each succeeding year. Before taking up the original papers to be presented for reading and discussion I would ask your attention for a few moments to consider of what dermatology actually consists. The subject, I believe, will not prove uninteresting nor without profit practically. Let me propound the questions, What are so-called skin diseases, and what is their nature? Which diseases are entitled to be designated "skin diseases?" Is it possible to separate them from the many general diseases accompanied by cutaneous symptoms?

Answers to these questions may at first thought appear easy, and so they seemed to the writer many years ago, when thoroughly imbued with the spirit of local pathology, as taught by his former and respected master Hebra, it was deemed all-sufficient to study cutaneous diseases purely objectively. But the questions propounded upon investigation really became difficult problems, especially with the light that has been thrown upon dermatology by comparatively recent studies. The field, viewed in every direction, has become immensely enlarged, and the amount of work done, both clinical and pathological, has been remarkable. I believe, however, that a satisfactory solution of these problems may be found. The questions that immediately confront us are, shall the term, "skin disease," continue to be used in its ancient sense? Shall the affections of the skin be looked upon as morbid entities, as diseases whole and complete in themselves and confined to the skin? Or, taking a broader view of the subject, shall they be defined so as to include all manifestations that may occur upon the integument irrespective of the symptoms, cause or nature.

The first and restricted proposition is that according to which these diseases were studied and classified a century ago, by Plenck in Germany and by Willan in England, when the list of diseases was small and knowledge of them meager. I have no desire to belittle the work done by the fathers of dermatology. Willan, especially, was an eminent general physician as well as a distinguished dermatologist. His treatment for the commoner affections of the skin was both judicious and successful. But the important questions of etiology and pathology were then for most diseases not at all understood. Very little was known on those subjects. The origin of most disease was regarded as "obscure." The facts that a mite was the sole cause of scabies, and that ringworm was due to a fungus were still unknown, while the observation that almost all the drugs in the "Pharmacopœia" are capable of producing disorder of the skin was not even suspected. Affections of the skin were regarded mainly objectively, and were studied much as a model or a picture might be viewed. Beyond the actual expression on the integument they were not closely investigated; the causes were regarded as obscure; and this mode of studying them has held good through decades, up to almost the present date. This method is in no way to be criticized, so far as it goes, but by itself and without the assistance of general pathology, it is far too restricted to meet the requirements of existing knowledge. It fails to recognize the important fact that the integument is a part of the whole organism, and therefore is subject to the great laws of general pathology, and that diseases affecting the integument are not only to be studied as localized areas of disease, but also in their relation to the system at large.

For the majority of cases no laws can be laid down tending to separate the local from the so-called general diseases. This is particularly true of the inflammatory affections, and I believe in many cases it is wise not to press such questions too closely in our endeavor to determine these intricate problems. Local pathology, interesting and satisfactory as it is as a study, must never be permitted to outweigh the general process, to which in many instances we must look as the *fons et origo* of the disease. That some diseases are strictly local in all their aspects will be denied by no one, but it is practically often difficult to decide where to draw the line between such affections and those due to influences and causes remote from the skin, as, for example, in the case of the many and often obscure reflex affections.

On the other hand, it is not difficult with our knowledge of to-day, to give examples of some true skin diseases. Notably among these may be mentioned the local parasitic affections, the inflammations due to numerous external causes, as for example the rhus plant and certain of the hypertrophic, atrophic and neoplastic diseases, such as callositas, clavus, cornu, molluscum fibrosum and molluscum epitheliale. In these affections, and in some others that might be cited, as far as our knowledge extends, the skin is the only organ of the body invaded at any time in the course of the disease. But while this holds true for a considerable number, there are still many that are in reality widespread diseases,

the skin being only one of the organs involved by the process.

As instances of such may be cited the so-called exanthemata, as well as other eruptive fevers, the eruptions due to various poisoned states of the system, as in septicemia, glanders, leprosy and syphilis. There also exists another group of well-known cutaneous manifestations in which it is difficult to determine whether the process is really confined to the skin, and whether it does not also involve other structures of the body as, for example, the epithelium generally, as in pityriasis rubra and dermatitis exfoliativa. Another group would comprise herpes zoster, pemphigus and the like, where the nervous structures, central or peripheral, are in some way at fault.

Still another class consists of diseases which, while eminently skin diseases, are in some cases, at least, dependent upon certain peculiar states of the economy for their existence, as a type of which psoriasis may be given. As an example of the effect of the state of the system at large upon this disease, I may cite the case of an old gentleman, an experienced physician, whose chronic and inveterate psoriasis had resisted all manner of internal and local treatment, but who upon going to sea immediately experienced relief and a rapid diminution in all the symptoms, so that in less than a fortnight he had practically recovered from a disease which had for a long period proved entirely intractable to our best remedies.

Another well-defined disease attacking the skin is eczema. While this is often a local affection, it may also be started into existence and kept up by serious internal derangements of the economy. In the latter cases it must be regarded in part, at least, as a symptomatic affection, as in the case of other symptomatic disorders, as urticaria; for with improvement of the digestive and assimilative functions or nervous system the eruption improves or disappears. These observations are particularly striking in the case of infants and children.

But it is not so much my purpose to specify and to differentiate the local from the general diseases affecting the skin, as it is to direct attention to what I believe to be an important truth in medicine, namely, that many cutaneous lesions which have long been and still are regarded as local skin diseases are really cutaneous expressions of certain general pathologic processes, due to varied causes. If this proposition, which might be elaborated, be accepted as an accurate observation, it brings us to the point I am desirous of establishing, namely, that our ideas of dermatology should be greatly enlarged. I am firmly of the opinion that this branch of medicine should include all morbid manifestations that appear on the skin, whatever may be their cause, their nature and their character. Dermatology has properly to do with the integument and all that pertains to it, and moreover with all the varied causes that may disturb that organ. Thus the exanthematous and the numerous and diverse symptomatic eruptions, whether superficial or deep-seated, fugitive or persistent, are all entitled to a place in the group. One observation in support of this view is that practically it is often impossible to differentiate the several varieties of cutaneous inflammation which resemble one another, except through the causes which produce them. It is a notable fact that the same pathologic state of the skin and the same lesions may be produced by several and even diverse causes, directly or remotely, entirely distinct from one another, as in the case of acne, acne rosacea and urticaria.

Thus we note in practice that the lines separating the so-called idiopathic from the symptomatic diseases are far from being so sharp as is generally supposed. Authors of text-books and systems of dermatology would have us believe that the various diseases may all be arranged and satisfactorily classified, and that they may in all cases be readily differentiated from one another. While this undoubtedly holds true for the majority of cases, ample allowance must be made for atypical, irregular and anomalous forms of disease, of which there occur, I am convinced, more examples than most authors are disposed to admit. Nor is sufficient latitude given in describing disease in general for complications which may occur, nor for the merging of pathologic processes into one another. On this latter point, in particular, I would lay stress, especially as expressing certain anomalous forms of diseases. Mr. Hutchinson, of London, was one of the first to direct attention to this point, of which we all I am sure have seen examples.

As our knowledge of disease grows, so does the list of diseases increase, new affections, new varieties and combinations appearing and being described. To illustrate this observation we have but to look over treatises on dermatology published twenty-five years ago and to compare them with the works of to-day. The growth in this direction has been remarkable. Not only has the list increased, but it is still growing from year to year. Observations of this kind go to show, I think, that it is only a matter of time when every lesion that may occur on the integument must be included in dermatology. There was a period, not many years ago, as most of us can remember, when erysipelas was regarded as an exanthema—an exanthematic fever, and as being therefore altogether beyond the pale of dermatology. In those days that disease, it was said, was not a skin disease but a constitutional or a general disease, and that its relation to the skin was only incidental. How fallacious was this view, how slight our knowledge about this disease then, I need not more than refer to. I believe that before long certain other diseases will be recognized as being properly entitled to a place in cutaneous medicine which now are relegated elsewhere. Such a grouping should obtain, not with the view of magnifying the subject, but that the various similar and dissimilar diseases and the expressions which they are capable of producing on the skin, may be brought together for purposes of study and comparison.

The time has arrived when we should endeavor to recognize not only the particular form of eruption, but what is more important, also, the cause which has produced it, upon which success in treatment may depend. Diseases of the skin must be studied from the standpoint of general medicine. It is not possible to comprehend the meaning of certain forms of inflammation of the skin without taking the broadest view of the subject. Thus if we are inclined to regard such diseases as dermatitis exfoliativa, pityriasis rubra, lichen ruber, dermatitis herpetiformis, and the like as mere local cutaneous inflammations we fail to understand the significance of the symptoms. Symptoms and causes must be studied together. The former are elementary, and constitute

the alphabet of dermatology, which it need not be stated must be learned. But eruptions in themselves, as mere forms of superficial inflammation, are by no means so important as the relation of the lesions to the causes. To express this idea more plainly, take the disease, eczema, as an instance. Here in some cases, as in neurotic eczemas, the discovery of the causes at work in producing the eruption is the key to the situation, without understanding which no success in the treatment will probably be obtained, and many other similar instances might be cited. Thus it happens that some diseases are practically uninfluenced by local treatment, and that not until we investigate their possible relations with the general economy do we appreciate their nature. The general practitioner, who has been trained in cutaneous diseases, has the opportunity of advancing dermatology quite as much as the specialist, and his services in aiding the good work can not be dispensed with. Some of the best work latterly has been done by men who are not only accomplished dermatologists but equally distinguished general practitioners of medicine and surgery. We owe a great deal to such writers and teachers as Jonathan Hutchinson, Paget, Stephen Mackenzie, Fagge, Pye-Smith, Robert Liveing, Duckworth and McCall Anderson.

The objective study of skin diseases is fascinating, and has without question its uses in more ways than one, but it is important that we take steps to advance beyond this elementary stage of knowledge, by attempting to recognize and understand the meaning of the local manifestation. It has been, and still is, too much the custom to study diseases of the skin in the light of pathologic pictures, to name the local manifestation and to so label it as a disease. It is much easier to give the disease a name and to label it than it is to comprehend the process at work. The former is comparatively unimportant for the patient, the latter a point upon which recovery may depend. The nature and meaning of the process in connection with the cutaneous symptoms has not received enough attention, and I believe this to be one reason why the treatment of many of these diseases in the past has been so notoriously unsatisfactory. At all events the relations of the cutaneous disturbance to other structures and to various states of the economy should be much more thoroughly investigated by dermatologists than is the present custom.

To recognize any one disease, say syphilis, in its varied manifestations on the skin, requires familiarity with all other diseases with which it is liable to be confounded. Therefore, to be an accomplished diagnostician, one must be conversant with every form of eruption to which the skin is liable, including the not rare atypical and aberrant forms. In regarding only the well-known and clearly defined obvious diseases of the skin as belonging to dermatology, this branch of medicine is not only belittled, but the true meaning of many lesions on the skin is not appreciated. I would insist, therefore, that the manifold and varied changes that take place in the skin due, as we now know, to such a multitude of diverse causes, should be viewed as phases of cutaneous medicine rather than as skin diseases. The idea of this vast array of diseases being morbid entities, for which the integument alone is accountable, must in many cases, at least, be abandoned in favor of the principles of general medicine.

Allusion has been made to the fact that the same or similar lesions may be called forth by wholly different causes. This also is a point to which attention has not been sufficiently directed by writers. As illustrative of the observation, the similarity in the eruptions of eczema and scabies may be referred to. Here the causes at work are different but the result, as far as the skin is concerned, is much the same. On the other hand, the same cause may produce entirely different cutaneous lesions. A striking example illustrating this idea is found in dermatitis herpetiformis. Here the same cause at one period of the disease gives rise to an eruption resembling erythema multiforme, at another period to herpes, again to impetigo, and finally to pemphigus. We note thus that one process may occasion numerous distinct lesions, which individually may resemble what have been heretofore regarded as well-known distinct diseases.

If we would study dermatology with the view of learning all that it can teach us, not only of the skin but of general medicine, we must look in the majority of cases beyond the mere eruption, valuable and important as this is in all cases as a guide to the pathologic process at work. While, even in the case of local affections, it may not be necessary to look beyond the skin itself, we may nevertheless find interesting facts bearing on cause and pathology by searching within the economy. The cutaneous disturbance in many instances is distinctly indicative of some irritation or disorder in other regions, organs, structures or fluids of the body. That we are not able always to discover and to designate the causes, merely shows our ignorance. I am of the opinion that the relations of the skin to other parts and functions of the economy are at the present date only partially understood, and that there are many points which will sooner or later be elucidated which will bring cutaneous medicine still closer to general medicine. Much, however, has been accomplished in this direction during the past twenty-five years, and I am pleased to add that a fair proportion of this good work has come from the labor of our countrymen.

This brings me again to the question propounded at the beginning of these remarks, viz.: What are so-called skin diseases? The answer, I believe, has been given through the principles to which attention has been called. It is simply this, that our conception of the scope of dermatology must be so widened as to include every pathologic manifestation which occurs in the integument, irrespective of the cause or the nature, from a practical standpoint. The great value and importance of dermatology is that it should teach us to know the nature of various processes, as they affect not only the skin but the whole economy. Dermatology should be for the physician as a key with which the skin is made to reveal, in many instances at least, the nature of the process at work in the general system or in special organs, which without this aid might remain obscure. Striking examples supporting this view are noted in syphilis and in leprosy, where the cutaneous manifestations are sometimes the only indication of the presence of these diseases in the body. The recognition of the nature of the cutaneous lesions is often of the greatest value in the general diagnosis. This observation applies pointedly in the case of the erythemata and certain general infectious diseases.

While, therefore, not losing sight of the fact that

some cutaneous diseases are strictly confined to the structure involved and have no other than a local significance, there are many in which the skin lesions must be regarded as being merely one set of a series of symptoms due to some special or general cause having its seat in other structures as well as in the integument. The part that the nervous system plays in the production of varied diseases of the skin is, I am firmly convinced, immense. While its power and influence as a factor is well understood to-day, owing largely to the special writings of such observers as Eulenberg and Guttmann, Bulkley, E. Long, Fox, Crocker, Schwimmer, Kopp and many others, I am of the opinion that its influence over the skin is at present far from being properly recognized. The nerves are avenues by which a multitude of diverse influences reach the skin. The future will, I feel sure, see this particular subject much more elaborated than it is to-day.

ERYTHEMA EXFOLIATIVUM RECURRENS.

Read in the Section on Dermatology and Syphilography, at the Forty-fourth Annual Meeting of the American Medical Association.

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The erythemata have always possessed a large amount of interest for dermatologists, and the numerous apparently aberrant forms which have been observed in late years have invested the subject with an amount of importance which was not conceded to it heretofore. It is more particularly in regard to the etiology of the different forms that research has been made. In addition to this there have been presented certain forms which have excited much interest on account of their assumed rarity, but which are, possibly, not so infrequent either on account of mistakes in diagnosis, or ignorance of this pseudo-rarity, or an indifference to making any record. These circumstances, singly or combined, have conspired to produce an impression in many instances that a certain condition or group of symptoms was rare, when in reality it was common and had either escaped attention or failed to arouse any interest, under the mistaken idea that it was so well known as not to deserve even a passing mention. Under these circumstances, every new record helps to swell the list and without detracting from the credit of those who first noted the matter, it contributes to a vulgarization of a certain amount of knowledge which should come within the grasp of every one. It is for this reason that I wish to place upon record a condition which is an apparently unusual one, but which in my opinion is observed much more frequently than medical literature would lead us to suppose. I refer to intermittent scarlatiniform erythema or erythema exfoliativum recurrens. Medical literature, up to the present, seems to be rather meager, so far as the number of accounts of this trouble is concerned. A hasty search through current medical literature and works on dermatology has yielded but small results and larger returns will have to be left to the future.

Before entering into any farther considerations upon the subject, I will give the history of a case as furnished by Dr. Edward C. Bennett, under whose care it occurred, and to whom I am indebted, not only for the anamnesis but for the specimens which are figured, as well. I am desirous of returning my thanks to him for this, as he kindly conferred with me regarding the case which he very justly considered an unusual one.

In order that a more complete record of the disease under consideration may be made, I will append condensed histories of other cases which have recently appeared in print, in order that a more easy reference may be made and the points of similarity, both from a clinical and etiological point of view may be made more apparent, and thus enable the reader to follow the reflections deduced, with greater facility.

The cases which I propose giving do not by any means include all those which have been reported, but they are sufficiently numerous to give a general idea of the characteristics of the disease, as well as to give a certain amount of information in regard to the clinical peculiarities of the process, and thus afford an opportunity of drawing some conclusions in regard to the etiology of the process. In addition to this, it affords us almost a certainty in deducing conclusions as to its comparative frequency. If we are to judge from the number of cases which have recently appeared in current medical literature, we would be led to the conclusion that the trouble while not frequent is far from being unique or even rare.

With these few prefatory remarks, I will proceed to give a brief résumé of a few cases which have recently been described and then make a brief analysis of them:

Case 1.—(J. Frank, M.D. and W. C. Sandford, M.D., in the *American Journal of Medical Sciences*, August, 1891.) John H. P., miner, 34 years of age, well-built and healthy. Skin is perfectly normal. His parents are living as also maternal grandmother; is the second of a family of thirteen, all of whom are living. On July 24, following his birth (Dec. 29, 1857) he was suddenly taken ill, vomited and in a few hours the entire surface of the body was scarlet red. The symptoms subsided in a few hours, but on the fourth or fifth day following the attack the entire cuticle was cast off, and a few days later the nails of his hands and feet were also shed. This was repeated every year on the same date. The patient first remembers the shedding in 1865 and he states that these attacks occur each year on July 24, usually at 3 P.M., and never later than 9 P.M. The paroxysm begins abruptly. Patient has a feeling of lassitude and weakness of fifteen to twenty minutes duration, followed by muscular tremors, nausea and vomiting, a rapid rise of temperature, skin and mucous membrane of tongue and mouth become red and inflamed, and are hot and dry. No perspiration appears after the paroxysm begins until the cuticle is cast off. The patient has been delirious three times during these attacks, once for nine days. In his early life the cuticle began to shed on the second or third day after symptoms appeared, and was complete by the fifth day; but each succeeding year it takes a little longer, until now it is ten or twelve days before shedding is complete. The cuticle can be detached in large sheets, and from the hands and feet in the form of gloves and moccasins. The nails are loosened and crowded off in about four weeks after the acute stage.

Here follows a detailed account of the attack:

Vomiting took place, the erythema extending visibly. Pulse 68; temperature 97 degrees. The highest pulse noted and temperature observed during the attack were 92 and 103 degrees respectively. July 26, two days after the beginning of the attack, the skin appeared normal, the temperature having returned to the normal. July 27 the epithelium of tongue and mouth came away. July 28, perspiration was free on forehead and under eyes. The cuticle on chest was raised in the form of blisters by the perspiration. Desquamation then set in and continued until August 11, when the left moccasin was removed. After the removal of the cuticle the skin was very soft and delicate; and where the former was normally thick, the new skin was very sensitive. August 26, the nails of the little finger and second finger of right hand were shed. September 2 those of the little finger, second and third fingers of the left hand were retracted. Both thumb nails removed September 5; and the nails from

the big toes which were the last to come off, on September 8. The other nails were cast off in pieces while patient was at work, so that the exact dates could not be noted.

The above is certainly unique in one respect—the recurrence of the trouble on exactly the same day of the year for so many years in succession. It is certainly deserving of more than passing attention for this reason.

Through the kind permission of Messrs. Lea Brothers & Co. of Philadelphia, I am able to present the illustrations occurring in Dr. Frank's excellent paper. A much better idea may be gained of the desquamation which occurs, through this graphic representation, than mere words could convey. As may be seen we have presented a picture of the patient desquamating and one of the portions of exfoliated epidermis which were secured.

Fig. 1. Dr. Frank's case of erythema exfoliativum recurrens.

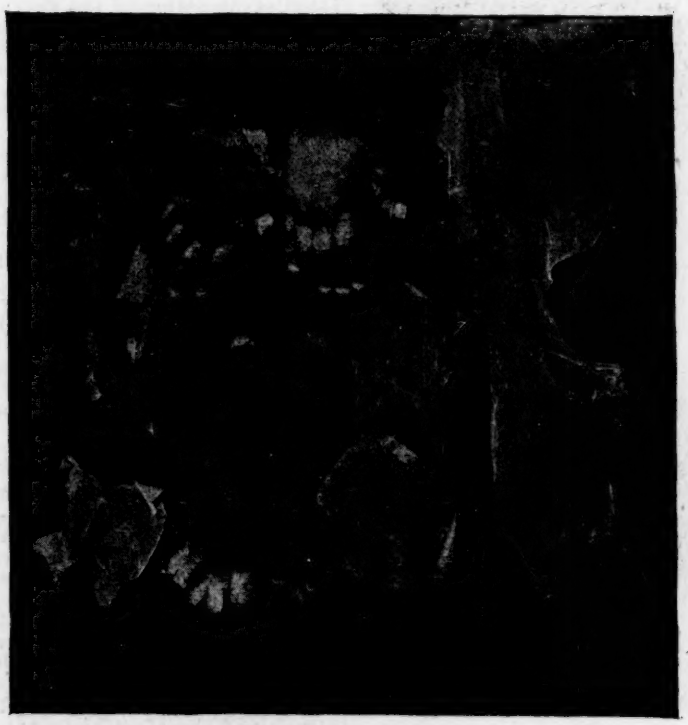

Fig. 2. Epidermis shed in Dr. Frank's case.

Case 2.—(Henry William Blanc, B. S., M.D., *International Clinics*, October, 1891.) J. C., white, male of 23, whose occupation was cotton scoreman. Both parents living and in good health. Three brothers and two sisters living and in good health. When 10 years of age he was treated for what was called scarlet fever, which lasted several weeks, leaving him perfectly well after desquamation. The following spring all the symptoms of scarlatina reappeared. From this time until 1884 he had two attacks annually. In 1884

he had none. Latterly the attacks have been irregular, although generally appearing twice a year The intensity of the fever and eruption has been growing milder and the desquamation more marked. On several occasions all the finger nails have fallen off.

The attack begins by a feeling of malaise followed by a fever lasting forty-eight hours. The rash appearing on the second or third day, lasts about four days. Paroxysms of itching occur during this time. The skin dries up and formication is present. An attack lasts about five weeks, although when the nails are shed it occupies one month longer.

Epidermis shed from hands and soles of Dr. Blanc's case. The only rupture of the gloves occurred when the hands were withdrawn.

Epidermic glove removed almost complete from Dr. Blanc's case of erythema exfoliativum recurrens.

Fig. 3 and Fig. 4.

In the description of an attack we do not find nausea mentioned. There existed constipation, however. The highest temperature recorded is 102 degrees; pulse 85. Patient feels nervous as eruption is spreading over body.

When the patient was peeling in large flakes, the skin was noted to be dry and in some places raised like a blister, but containing no water beneath. The new skin was very tender. Patient stated that each time he desquamated all of his freckles passed off. The patient complained of a cold sensation and very tender surface when desquamation had set in, and he declared that when the skin first began to crack he had had a chilly feeling lasting four or five hours.

Through the courtesy of the J. B. Lippincott Co. of Philadelphia, I am enabled to present a plate illustrative of the gloves and moccasins shed by this patient. As will be seen the gloves are complete with the exception of those portions which were adherent to the nails. The soles, only, of the moccasins are presented as the sides were torn into small pieces by the shoes of the patient. He also stated that he ordinarily wore gloves during the period of desquamation of his hands.

Case 3.—(Henry William Blanc, B.S., M.D., *International Clinics*, October, 1891.) Mrs. S., aged 21 years. In 1883, when 13 years old, she had an attack of scarlatina lasting about eight weeks. She was well until 1885, when she had a second attack of scarlatina lasting about six weeks. Nothing especially noticeable was observed in the second attack, except that the desquamation was excessive. In October, 1889, a scarlet rash similar to the others appeared, unaccompanied by fever. It remained two or three days and disappeared, followed by profuse desquamation which lasted from five to eight weeks, the epidermis peeling in large flakes. During the intervals between these attacks her health was very good, menstruation being regular and painless.

In March, 1890, she was married, and during the next month another athermal rash appeared. It was not very deep except on the hands and feet. A large amount of desquamation followed. In January and February, 1891, she had the rash followed by peeling of the epidermis. She had borne a baby during the preceding month of December, and during her attacks she nursed the baby regularly without communicating the disease.

There existed hyperesthesia of the skin when seen during the desquamation of the February attack. The skin had a slightly transparent appearance suggesting anemia. On the neck, forearms and legs the skin was dry and scaly, peeling easily when rubbed. The patient stated that immediately following the rash there was diminished sensation, which became transformed to hyperesthesia when the desquamation occurred.

Five weeks after this examination the patient contracted a severe cold, and the next day had a burning sensation in the fingers, palms of the hands, toes, back, throat, tongue and eyes. These parts were fiery red. This was another attack.

No history of vomiting or nausea is given.

Case 4.—(Case of Dr. W. T. Bolton, reported by Henry William Blanc, B.S., M.D., in *Journal of Cutaneous and Genito-Urinary Diseases*, January, 1893.) Maggie P., age 20, while perspiring freely had perspiration suddenly checked, May 6, 1892. Had nausea and vomiting with pains in back and limbs. Was given a purgative. May 9 the temperature was 99.6, pulse 104, nausea and vomiting. Dizziness and pain present. Skin of face swollen. Face, neck and upper part of chest erythematous. Patient stated that she had had a similar eruption in February, 1890, and in August, 1891. May 10, 1892, the rash had extended over whole surface of body. On next day epidermis of upper eyelids beginning to desquamate. On May 12 the mucous membrane of roof of mouth exfoliated in a solid mass. On that and the two following days the epidermis of the entire body was thrown off. The epidermis of the hands and feet came off without a break. The nails were loose but did not come off.

May 31, twenty-five days after the beginning of the last attack, she was again attacked in a similar way, the symptoms being milder. June 4 the exfoliation occurred.

The nails of the fingers and toes fell off after the first attack, and also after the two previous ones.

Therapeutic interference was very little. One dose of quinin and phenacetin, two grains and a half of each, was given in the course of the disease, and several times the skin was anointed with vaselin and quinin.

None of the relatives of the patient has ever suffered from a similar condition. The first time it occurred the patient supposed that she had scarlet

fever. A fact observed was the low pulse rate and comparatively small febrile reaction.

It will be observed that in the three preceding cases, a particular note is made of the fact that the parents were healthy persons who never suffered from any similar trouble. In fact, this seems to be noted in all the cases observed.

Case 5.—(Personal. Case seen through the courtesy of Dr. Edward C. Bennett. Unpublished.) Mrs. A., a brunette of medium height and weight, 26 years of age, has always enjoyed fair health. She has one child and has had one miscarriage, since which time her menstruation has been irregular and painful. In September, 1891, she became ill, the symptoms being ushered in with nausea and vomiting, high fever and pain distributed over the entire body. On the succeeding day there appeared an eruption which extended over and involved the entire cutaneous envelope with the exception of the face and neck. The eruption was an erythema accompanied by intense itching. The third day after the skin assumed an appearance suggestive of edema, being clear and apparently puffed up. It began to crack and separate from the body, i.e., the horny layer of the epidermis began to exfoliate. The patient removed this exfoliated epithelium from her hands and feet entire, in the form of gloves and moccasins. She also removed long strips from her trunk, arms and legs. There was desquamation of every part of the body with the exception of the scalp and face, in which there was no change whatever. The nails were not shed, nor was there any falling out of the hair discoverable in any portion. When the desquamation had arrived at an end, the exposed new skin was intensely red in color and glazed-like in appearance. In addition to this there existed marked pruritus. In about one week from the onset of the attack the affected epidermis had returned to its normal state both objectively and subjectively.

In June, 1892, Mrs. A. had another attack which was in every respect an exact counterpart of the one which has just been detailed, the onset being the same, and the various periods intervening between the different conditions being of the same duration.

Dec. 15, 1892, was the date of a third similar attack, with this exception, however—the patient was suffering at the time with typhoid fever.

So far as the treatment employed is concerned, it may be well to state that it always consisted in the administration of the following, which seemed to act efficiently:

R. Quinin sulphatis . . . . . gr. iij.
Pulv. capsici . . . . . gr. ¼.
M. Ft. tal. dos. q. s.
Sig. One such dose every three hours.

The symptoms of the case were always strikingly malarial, and on this account the quinin was administered.

For the condition of the skin which succeeded the desquamation, the following ointment was ordered with complete success, as it proved efficient in relieving the sensitiveness of the denuded integument and caused a disappearance of the pruritus, besides acting as an efficient protective during the complete restoration to the normal of the horny layer:

R. Campho-phenique . . . . . ℥j.
Albolene (solid). . . . . ℥iij.
M. Ft. ungt.

A few points which have been noted by the patient and to which she has drawn attention are the following: Each attack of desquamation comes on just one week before the menstrual flow. Her attention was called to this circumstance by the fact that it occurred each time in that manner, and it can hardly be looked upon as a coincidence. She further states that after taking an ordinary dose of quinin, she experiences a prickling, tingling pain in the skin of the thumb. On this account she is inclined to believe that the general desquamation is due to the remedy, but it is evidently a *non sequitur*.

The plate illustrates portions of the exfoliated epidermis obtained at two different periods. The upper one, which is nearly a perfect glove, was removed in June, 1892, but little care being taken. The lower figure is a representation of the epidermis of the palm which was removed in December, 1892. There was no intention of preserving this, which accounts for its rather ragged and incomplete appearance. However, the two are good examples of the manner in which the desquamation occurs—*en bloc* and distinctively separate from examples of furfuraceous or large squamous exfoliation.

The above cases are given without making any attempts to resuscitate more or less doubtful analogous cases from literature. The present ones are

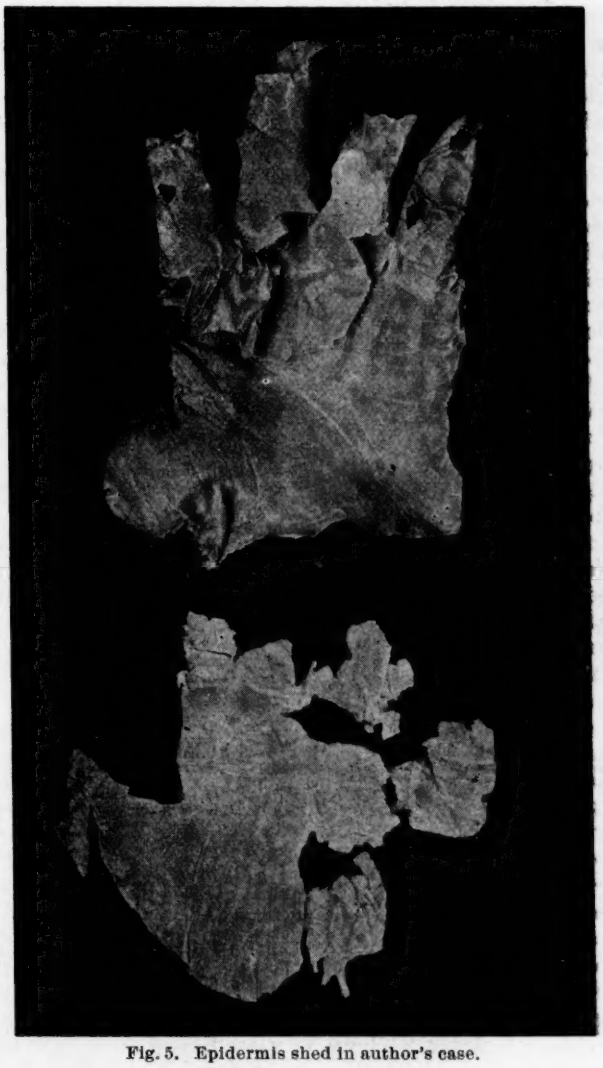

Fig. 5. Epidermis shed in author's case.

distinctly marked out, and have been described without much inclination to fit them to any particular pathologic view. Besides this, they have occurred within a very few years of the present day, and under the light of a more extended knowledge of dermatology, thus avoiding their being labeled with names which are not only inappropriate but absolutely misleading. For there is no doubt, whatever, in my mind, that the various desquamative erythemas have led to a great confusion of terms; not to mention the almost impenetrable chaos which has been occasioned by the mixing up of these various affections with the dermatites having analogous characteristics and yet

wholly distinct in many respects. These distinctions are not wholly etiologic in character nor is it an absolute necessity to make anatomo-pathologic studies to establish them. Close attention to clinical details will suffice to accomplish the task, as well as to clearly distinguish from each other the various processes which are incidental to the problem. It is for this reason that I propose to discuss, primarily, whether the disease before us is a dermatitis or an erythema.

To begin with, I desire to speak of the clinical characteristics of the two processes, before examining into the pathologic anatomy of the conditions. So far as observation can teach us, an erythema is always a transitory condition, in so far as it remains in *statu quo*. Its natural termination is embodied in a retrograde metamorphosis eventually leading to the normal condition. Moreover, there is no destruction of tissue, properly speaking, but merely the loss of such epithelial formations as are superficial and which are susceptible of degeneration, without the necessity of the formation of substitutive fibrous formations, such as are ordinarily denominated under the name of cicatricial tissues. In the case of inflammation, we find that the process is entirely distinct. In the inflammatory process the changes are not limited to the superficial structures, but they encroach upon the deeper formations and, as a result, we have their involvement manifested by a perceptible thickening which is a characteristic of the change. Destruction of a more or less limited extent goes on and in the reparative stage the loss of tissue is made up by a substitutive formation which does not always share in the nature of the tissues which formerly existed.

So far as the skin is concerned, we find that erythema is characterized by an increased vascularity of the epidermis, chiefly, although the cerium may participate in the exaggerated circulation. The process is essentially an angio-neurotic one, and may manifest itself in a generalized or a circumscribed form attended or not with edema, and certain subjective sensations. The lesions, however, which are present are almost entirely included within the limits of increased vascularity, and the presence of various and varied subjective sensations. The most prominent symptoms are superficial in character as well as in their limitations, and the culmination of severe forms is manifested in desquamation which may vary in intensity from a furfuraceous type to a separation of the horny layer in large sheets. In inflammation we are confronted with an entirely different history and appearance. We find that a prominent subjective symptom is pain of a deep-seated character. There is also a susceptibility to an aggravation of the condition manifested by lesions of a more or less destructive character, suppuration being a not infrequent accompaniment and necessarily including in its development more or less destruction of tissue which is objectively manifest. It may be stated, however, that true inflammations of the skin exist wherein we do not have any clinical manifestations beyond a marked hyperemia and abundant desquamation. But it should not be forgotten that, in such cases, there is more than such a superficial survey would indicate. We have clinical evidence of the deep nature of the process shown by the thickening of the skin. Not only this, but there are general symptoms which are also indicative of the graver character of the malady. The chronicity of the process itself is an indication pointing to its inflammatory nature and the general disturbance, so often noticeable, is of such a character as to determine the existence of more than a superficial process. It will be found in this connection that in erythemata the general symptoms are of an acute character, ofttimes quite marked, yet of a comparatively transitory nature as a whole. In inflammations, on the other hand, they are not of so acute a character, but are more lasting; and it is this very element of persistence which exercises so patent an effect in the production of inflammatory changes in the integument.

I will not weary you with the recital of examples in illustration of the few generalizations I have presented, but will enter upon a particular reference to the cases I have hastily summarized, in order to justify the opinion that they should properly be included under the erythematous diseases, in preference to the exudative or inflammatory, and that the name which has been proposed for this unusual process is one which is proper and distinctive.

We find, upon examining the records of these cases that the scarlatiniform eruption which preceded the desquamation spread with great rapidity resembling very much, in this respect, the erythematous processes occasioned by the ingestion of particular remedies in certain individuals. Another peculiarity attendant upon this generalization of the hyperemia, is the fact that it suddenly stopped short at a particular point, when the process of retrogression seemed to take place immediately. These are certainly not the usual marks of an inflammatory process, such as we ordinarily observe. For it must not be forgotten that the desquamation which is so abundant in the disturbance with which we are dealing, is rather a result of the process than a part of it. In the same manner, the exposed epidermal tissues are the objective indications of a loss of a certain portion of substance due to the sudden hyperemia causing an exfoliation of the horny layer, and thus leading to the condition observed. If we take any marked dermatitis or inflammatory condition of the skin, no doubt whatever can exist as to the complete difference existing between it and the process under consideration; and an inquiry into the pathologic anatomy of each one will completely establish the fundamental characteristics of each in such a manner as to leave no room whatever for any reasonable doubt as to the proper position to be assigned to the trouble I have described.

Dermatitis is a term which has been much abused in dermatologic nomenclature, and it has been the cause of leading many into errors which they would never have adopted had another word been used. Thus we find the generic appellation of "dermatitis medicamentosa" applied to a series of cutaneous phenomena having in common a similar causation, but frequently differing widely in the manifestations which are presented. The majority, I might say, are erythematous in nature and the homely expression of "medicinal rashes" is rather more close to the mark if not as elegant in diction. Another error which has led to a misconception of proper terms is the erroneous idea that desquamation is necessarily a result of inflammation, than which no greater mistake could be made. In the particular case in point, a further source of error would be

furnished by the observation of cases of dermatitis exfoliation or of pityriasis rubra, which to the superficial observer present many points in common with erythema exfoliativum; although an accurate observer would certainly be able to see so many distinctive characters as to almost draw the line of demarkation with sufficient sharpness to make it patent even to one not trained in the observation of diseases of the skin. I will now briefly consider the pathologic anatomy of the two conditions, as it will contribute in no small degree in throwing light upon the question before us.

The microscopic anatomy of a typical pathologic dermatitis and of an exfoliative erythema will serve better, perhaps, to explain the difference in the clinical pictures presented. I have chosen as illustrative examples two conditions which are sufficiently

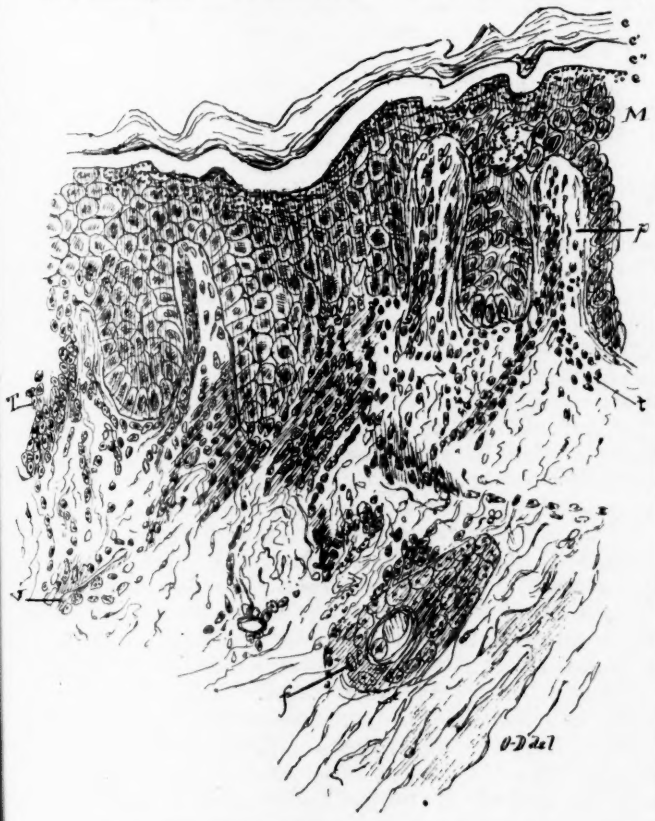

Fig. 6. Relapsing desquamative scarlatiniform erythema.

c.	Stratum corneum.	*p.*	Papilla.
c'.	Portion of above exfoliating.	*t.l.*	Embryonic cells.
c''.	Lowest portion of stratum corneum.	*l.*	Prickle cells.
e.	Stratum granulosum.	*v.*	Vessel.
M.	Stratum mucosum.	*f.*	Hair follicle.

well marked to demonstrate the points in question. In order to eliminate any possible personal equation, I have borrowed the illustrations from other authors. It will be found that the essential differences between the two are so well-marked as to leave no possibility of a doubt. Petrini presents a section of a case of relapsing desquamative scarlatiniform erythema (Comptes Rendus du Congrès Internat. de Dermat. et de Syphilig. de 1889. G. Masson, 1890, p. 44 et. seq.) which for all practical purposes is a disease identical with the one under consideration. Here we note that the upper portions of the stratum corneum are distinctly exfoliating, the lowermost portion remaining adherent to the stratum mucosum. The Malpighian layer has intercellular vacuoles in it and the papillæ are covered with embryonal cells. In some parts of the rete mucosum the prickle cells do not appear to have gone beyond the embryonic stage (T) while we find embryonic cells about the blood vessels and scattered up to the papillæ. Even the hair follicle contains hyaline globules. Many of these apparently embryonic cells have some of the characteristics of lymph cells or wandering corpuscles, testifying to the fact that the process which has called them forth is of a character denoting its recent occurrence. Moreover, the general contour and outlines of the papillæ are preserved as well as the interpapillary prolongations of the rete. In the latter the prickle cells have preserved all of their characteristics, the cell walls and nuclei being sharply defined and only modified here and there by being apparently replaced by embryonal cells. (T.)

On the other hand, a picture of a marked inflammatory trouble is so widely different as to immediately attract attention. I have chosen for an example a section of impetigo herpetiformis figured by Theodore du Mesnil (Archiv. f. Dermatologie u. Syphilis, 1891, September 5) in which can be seen a well-marked round-cell infiltration. Here we note a cellular infiltration and edematous exudation of the papillæ, which are apparently prolonged by the actual lengthening of the interpapillary prolongations of the stratum mucosum. The stratum corneum is intact, not having undergone any apparent change. The stratum mucosum is filled with lymph cells throughout its extent and at the edges where contact is effected with the papillæ a limited round-cell infiltration is visible. In addition to this, the blood vessels and lymphatics are markedly dilated and surrounded by a cellular infiltration. Pigment cells are found in the papillæ, an evidence which tes-

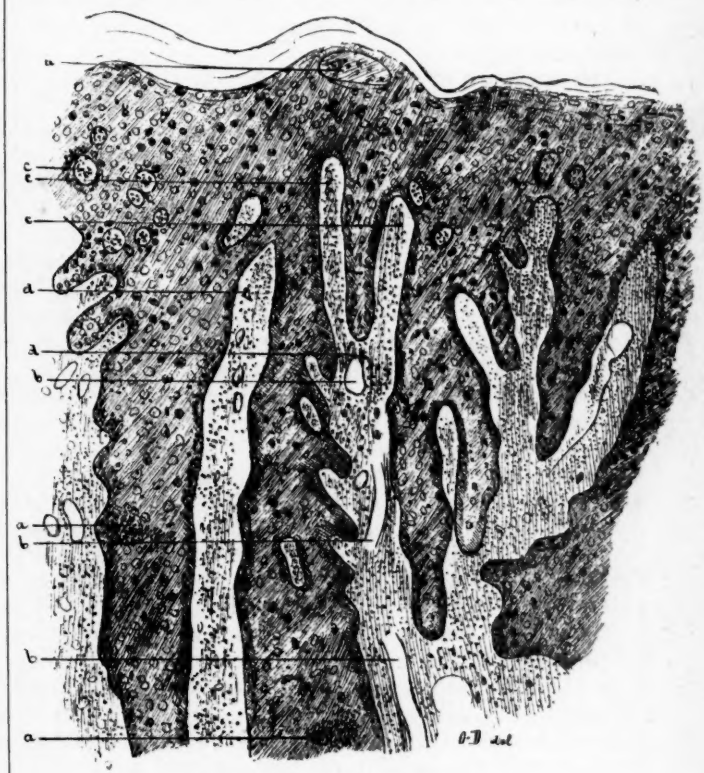

Fig. 7. Impetigo herpetiformis.

a. Round cell infiltration.
b. Dilated vessels and lymphatics.
c. Cellular infiltration and edematous exudation of the papillæ.
d. Pigment cells.

tifies to the fact that the process has existed for some time as is also shown by the other conditions present.

The two pictures given should certainly prove sufficiently conclusive as demonstrative of the rational differences existing between an erythema and a dermatitis, and as Petrini's demonstration is that of a process so nearly analogous as to be almost identical with relapsing desquamative erythema, such as described in the cases I have mentioned, it would appear to me that a careful consideration of the various points which I have brought forward would establish the fact, beyond the shadow of a doubt, that erythema exfoliativum recurrens is an erythema in the true sense of the word and not a dermatitis; and that the term, dermatitis, which has been applied to it is not only incorrect but misleading. It should be abandoned to give place to a term which is not only pathologically exact but which clinically is more clear, and which has the further advantage of placing the disease in its proper place in dermatologic nosology.

The etiology of the disease under consideration possesses more than passing interest. From the more or less imperfect histories of the few cases which are available it is a very difficult matter, indeed, to formulate anything of a definite nature. We can find but very few characteristics that are held in common by all the cases, beyond the exfoliation. The onset in each case is different, as also the course, duration and termination of an attack. The periods between separate attacks vary, not only in different individuals, but in the same one as well, in some cases. So far as determining a common cause is concerned, it can not be done. The alleged causes given by the patients differ, and no possible reason can be given by others for the peculiar affection which manifests itself in their persons. Taken altogether, we are confronted with a problem which appears rather difficult of solution, and the best that can probably be done is to weigh the probabilities in each case and determine that which seems the most worthy of consideration. It may be remembered that in a consideration of the scarlatiniform erythema of typhoid fever (*Journal of Cutaneous and Genito-Urinary Diseases*, August, 1890) which is relapsing in character, and to which the disease under consideration bears a remarkably close resemblance, if it is not identical in character, the opinion of Besnier was advanced, that the cause in scarlatiniform erythemas is never an exclusive one (*Ann. de Dermat. et de Syphil.*, January, 1890). This author states that, in his opinion, the eruption depends more on the subject himself; that there exists a predisposition. The individual becomes more susceptible to the process and this brings about a tendency of recurrence at continually shorter intervals; a circumstance which may be noted in all the cases given above, with the possible exception of the first in which the period of recurrence remained the same. Excluding toxic, septicemic, medicamentous and such similar causes, we are finally brought face to face with one conclusion which seems inevitable—that the cause is one dependent upon the nervous system and more particularly that portion in intimate connection with the vascular system. Dr. J. W. Moore long since regarded (*Dublin Journal Medical Science*, December, 1888) the trouble as one which probably depends on a reactive inhibition of the vaso-motor system of nerves. That this is the most probable cause is amply testified to by the opinions of those authors who have ventured to advance one. Leon Perrin regards the condition as a reflex dermatosis agreeing in this respect with Fournier, Lewin, Besnier and others. Dr. Frank, in referring to his case (Case 1) says that the fact that the recurrence of the symptoms appears on the same day, and even the same hour of each year, can be possibly accounted for by the fact that it is a disease of the nervous system, as it is analogous in its recurrences to certain types of hay-fever. To this, Dr. Blanc demurs somewhat by calling attention to the fact that there may enter a disturbing psychical element. Dr. E. L. Standlee reports a case of annual shedding of the nails (*American Medical Journal*, December, 1891) accompanied by some exfoliation, but the entire report is so incomplete as to afford no clue, beyond the fact that the first attack occurred after contracting typhoid fever, a disease which is very prone to leave its effects on the nervous system. Dr. Perret (*Lyon Médical*, 1885), has attributed the cause primarily to rheumatism acting secondarily through the nervous system, whereas M. Rossigneux (*Lyon Médical*, March 21, 1892) is inclined to regard a possible nervous cause. An ingenious theory has been advanced by Paul Blocq (*France Médicale*, Jan. 23, 1886) to account for the various periodical attacks which are observed in certain individuals. He looks upon the cause as some microörganism, which multiplies continuously, until a certain period of time has elapsed, when it seeks an exit and in this very effort to escape, the symptoms which are observed are produced. This is certainly clever, but it can not be made applicable to the disease under consideration, and could only possibly refer to infectious troubles such as relapsing erysipelas.

To my mind, relapsing desquamative erythema is, beyond all possibility of a doubt, a trouble due to disturbance of the trophic nerves. In the cases which we have detailed, as well as in the numerous instances which occur scattered throughout medical literature, we find distinct nervous symptoms mentioned. The patients suffer from headache, or itching, or localized tingling sensations, or some other purely nervous trouble. Again, we find that the thermic phenomena are either a low fever, or none, or a state of hyperpyrexia out of all proportion with the condition present. Delirium may be present (Case 1), or a state bordering almost on melancholia. So far as the influence of the trophic nerves on the circulation of the skin is concerned, there is no doubt of it at this day. The erythema pudoris or ordinary blushing may easily become transformed into a morbid condition. The blush which was at first easily elicited, later on comes on without any apparent reason, and becomes recurrent unknown to the subject. It is some functional nervous trouble, probably residing in the sympathetic ganglia, and if we but generalize the condition and make it more marked, we find it transformed into a universal erythema. Add to this the greater implication of nerve structure, and we find then a symptom showing itself which is characteristic of nervous trouble of a trophic character—exfoliation. That the disorder must reside in the trophic system is corroborated by the negative results which have attended all examinations for nerve alterations. That an angioneurosis is intimately connected with the process in the production of recurrent exfoliative

erythema is shown by the fact that slight edema accompanies the first manifestation. The skin appears more or less translucent and, in some cases, vesicles make their appearance. The appearance of these lesions, more or less grouped, constitutes another link in the chain of evidence pointing to a neuropathic origin for the trouble. Another circumstance which seems to indicate this, is the comparative shortness of duration of the acute period of the trouble. Following this, there is apparently good health, during which the exfoliation is taking place. The whole force of the attack seems to spend its fury in a few days, and the period following this is passed in getting rid of the *débris* of the nervous storm which has occurred. The exfoliation is rather slow, as the separation is but partial and must be completed by the gradual process of the relaxation and tightening of the skin. This is further evidence of the superficial nature of the pathologic process. In desquamative processes of a marked inflammatory nature, such as psoriasis, pityriasis rubra or chronic eczema, the shedding of the horny layer is continual and rapid, the regeneration not only keeping pace with but often exceeding the loss.

Before closing the consideration of the etiology of the process, one question still confronts us—and it is one which is by no means easy of solution, if there be any for it. It is the periodicity of the attacks. It is no explanation to say that it is of nervous origin, as we find it in hay fever. This is merely shifting the ground of discussion. Why should this periodicity exist? Besnier's dictum that it is a predisposition is an explanation which explains nothing. The very fact of recurrence attests to this. Why this predisposition should exist is the question which we desire to solve. We may invoke idiosyncrasy, but in no case so far recorded, with the possible exception of the toxic and medicinal erythemas, do we find mention made of any possible cause to account for the trouble and which was observed prior to each attack. Blanc has made one suggestion which might have a bearing upon this, when he speaks of the possible influence which the mind might have. We know that self-suggestion is potent in bringing about certain nerve disturbances, and in one susceptible to an erythematous reaction consequent upon trophic nerve disturbance, this might possibly be an explanation. A better one, perhaps, would be the direct influence of telluric or atmospheric causes upon the cutaneous envelope. We can easily understand how such would act upon the sympathetic nerve centers, and these in their turn bring about a reflex disturbance of the trophic nerves leading to the appearance of the erythema. And there is a history, in some cases of scarlatiniform erythema, of the attack following an exposure to a cold wind or chilling atmosphere. Moreover, herpes zoster is observed to supervene upon exposure to cold and damp surroundings, as also being caused by the purely psychical disorder of anger. I do not wish to pursue the subject at greater length, deeming what I have said sufficient not to convince, but rather to incline one to the theory of the neurotic origin of recurrent desquamative erythema.

The treatment is a very simple one, consisting merely in protecting and soothing measures. While, in many cases, symptomatic treatment has been employed, there is no evidence that it exercised any particularly beneficial action, so far as the cutaneous symptoms were concerned. The protective measures employed have certainly had a direct effect as prophylactics in preventing a possibly graver condition which might be induced by irritation due to an extraneous source. Of course, such measures are not only proper and rational, but even imperative. To neglect their application would certainly argue not only a disregard for the patient, but also a serious disregard for the exigencies of the case in hand. In the last case detailed, the patient was always supposed to be affected with malaria when the symptoms first declared themselves, and was accordingly given quinin, to whose effects she attributed her trouble. Still, others having the same prodromic symptoms and the same subjective sensations are recorded as never having taken any medicine, so that we can not conclude that the therapeusis had any effect whatever in calling the disturbance into being.

Is erythema exfoliativum recurrens a rare disease? We are inclined to say that it is not. There seems to be quite an amount of confusion existing in regard to its nomenclature and, for this reason, it has been described under a multiplicity of names which have only led to confusion. Idiopathic scarlatiniform erythema of a recurrent type, as well as recurrent dermatitis exfoliativa are, beyond a doubt, examples of the same affection. Many isolated cases are described, under various designations, whose descriptions and clinical histories coincide with the affection I have attempted to portray. Much confusion has been added by denominating it a dermatitis, as well as by magnifying certain minor attributes which are disproportionately enlarged and dwelt upon at the cost of others apparently more trivial and perhaps more important. As this paper has already transgressed upon the limits which it should occupy, I will close, hoping that it will have awakened a certain amount of interest in that ever shifting and varied group of cutaneous affections included in the classes of the angioneuroses and erythemas.

PNEUMONIC FEVER; ITS SYMPTOMATOLOGY.

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CHICAGO.

NERVOUS SYSTEM.

Headache of more or less prominence is encountered in almost every case.[1] In my experience it has not seemed to differ in character from that met with in other febrile disorders. It is a symptom of the early periods of the attack, in adults usually diminishing or ceasing after a few days. In children it is often a most distressing symptom,[2] continuing throughout the attack and possibly overshadowing all others. Severe frontal headache is so constant and prominent in senile pneumonic fever that its occurrence in an aged person should lead to an examination of the lungs. The headache is greatly aggravated by efforts at coughing and vomiting.

Juergensen[3] has met with two cases of pneumonic fever following exposure of the bared head to the hot sun, in which the seizure began with lancinating pains in the head and the symptoms of insolation.

It has been thought that headache is more constant and severe in those cases accompanied by nephritis, but I have met with nothing in my experience to confirm this view. In some cases there is an extraordinary pulsation of the temporal and retinal arteries, and in these I have thought the suffering to be more acute and severe.

Dizziness is sometimes an early symptom.[4] Vertigo and syncope are also rare phenomena.[5]

A male, age 44, after a two weeks' spree, was attacked, Nov. 11, 1886, with a severe chill, followed by several lesser ones, cutting pains in the right side and great distress. The pulse rose to 132 and the temperature to 100.4 degrees. The respirations were jerky and 45 per minute. The skin was hot and dry and the face flushed. Over the right lung there was bronchial breathing, mucous râles, increased vocal fremitus and a full, hollow percussion note. On the fifteenth day the patient had a fainting fit, with loss of pulse, labored breathing and death. At the autopsy the right lung was found hepatized, with rib-marks, and the right side of the heart dilated.[6]

My own patient was a farmer, 65 years of age, and the subject of a long-standing bronchitis. He was taken, Dec. 19, 1885, with the ordinary symptoms of pneumonic fever, locally affecting the lower lobe of the left lung. The cough was unusually severe and spasmodic, and every effort was followed by convulsive movements of the facial muscles of the left side, the head would be drawn around toward the left, and he would then fall back upon his pillow in a faint. The convulsive movements and unconsciousness were only of momentary duration. Recovery ensued after two weeks' illness. During exacerbations of his chronic bronchitis the cough has been, before and since, at times as severe and spasmodic as during the pneumonic attack, but syncope was not a feature.

Delirium is a common symptom in pneumonic fever.[7]

It was present in 14 of Caton's[8] 85 cases; in 29 of Chomel's[9] 240 cases; in 14 of Hermann's[10] 44 cases; in 12 of Holt's[11] 173 cases; in about 20 per cent. of the cases of Andral[12] and Louis[13]; in 52 of Sauter's[14] 331 cases; in a very large number of Heintze's[15] cases; in 26 per cent. of Satterthwaite's[16] cases; in about 8 or 12 per cent of those of Huss[17] and Briquet;[18] and in about 20 per cent. of my cases.[19]

Grisolle[20] and others have encountered it oftener in males than in females.[21] This has also been my experience, but I attribute the fact to the greater consumption of alcohol by males[22]—it being well known that delirium occurs vastly more frequently in the subjects of drunkenness than in those who are temperate drinkers or abstainers.[23] Excluding those who use alcohol to excess, from my list of male patients, and the proportion of delirious cases is about the same in the two sexes.

Delirium is encountered oftener in some regions than in others,[24] and is profoundly impressed by epidemic influences.[25] Individual peculiarities will also influence the development of delirium in this disease. Thus there are some persons who become delirious with the advent of the slightest provocation, while in others the inherent tendency is in an opposite direction. It is very common in infantile[26] and senile[27] cases. It is also said to be more common when the inflammation is apical,[28] spreading[29] or double, although my experience does not confirm the statement.

Delirium may come on at the onset of the attack[30] or, and this is more common, it may make its first appearance after the disease has reached[31] or passed its acme. It usually makes its advent at night, is always worse at this time, and may be noticed only at this period. In the severer cases, however, it is constant. The duration varies from a temporary outbreak to several days.

The development is, in some cases, quite sudden and without warning, but usually the delirium is preceded by very significant prodromata, e.g., restlessness, sleeplessness, headache, heaviness of the head, dizziness, vertigo,[32] tinnitus aurium, a peculiar change of voice, forgetfulness of pain, absence of mind, manifestations of surprise at ordinary occurrences, extraordinary acuteness of the mind and special senses, brilliancy of the eyes, intolerance of light and noise, heat of the head, flushing of the face, increased force of the cephalic circulation and other anomalous symptoms. In those cases in which the delirium seems to be merely a sign of approaching death the countenance may be pale and collapsed, the eyes sunken, the surface cold, and other obvious evidences of an adynamic state.[33]

The character of the delirium varies greatly in different cases, and at various times in the same case. It sometimes manifests itself in a simple inclination to loquacity, although the patient's conversation may be germane to the subject under consideration and quite rational. I have often met with this form and have always viewed its appearance with considerable anxiety.[34] In other cases the aberration of mind may be very slight—barely noticeable—and of a mild character. From these mild forms at one extreme, we may meet with every possible and imaginary gradation to the delirious tremor of the confirmed drunkard and the furious delirium of the raving maniac at the other.

In some cases the delirium may be of a low, muttering and dreamy kind, like that met with in typhoid fever. This form usually comes on late and in adynamic cases, and should be viewed as a signal of imminent danger, it being usually a fatal indication.[35]

In the case of drunkards the delirium is apt to be of the variety known as delirium tremens.[36] It usually comes on early in the attack,[37] either suddenly or preceded by restlessness, sleeplessness, etc., and is often so prominent as to mask the pulmonary affection. The delirium is a busy one, the patient being in incessant motion and constantly jabbering away at imaginary persons and things. There is usually present one dominant and unpleasant idea, which may be either fixed or changeable. Fear is constantly before the patient, and he is forever engaged in plans and measures for defense, escape and, possibly, attack. There are delusions of sight in which he sees noxious and horrible animals, demons, etc. The delusions often point towards the pneumonic disorder; "thus the patient declares that the air is stifled, that his nose is obstructed, and that demons are sitting on his chest."[38] Along with the delirium there is a tremor of all the voluntary muscles of the body, especially marked in those of the tongue and extremities.[39]

The delirium is sometimes furious, wild and even maniacal,[40] especially in the young and strong.

An intemperate man, aged 52, was seized, Jan. 14, 1884, with rigors, weariness and headache. On the second day the temperature was 102.2 degrees, and there was dyspnea, acute pain in the chest and crepitation in the right lung posteriorly. On the third day there was dullness and bronchial breathing, and the disease was well developed. The temperature ranged between 100.4 and 104.1 degrees, and fell to below normal on the sixth day. During the seventh night he was restless and somewhat delirious, although he lay quite still. On the seventh day, at 9 o'clock, he had a staring look, directed upwards, twitching of the facial muscles, dilated pupils and abolition of hearing. There was no noticeable fever and the pulmonary consolidation was undergoing resolution. In the afternoon actual frenzy developed. He would attempt to leave the bed and scale the wall. There was an incessant and rattling talk, and he would count in a gallop, in which exercise his wife must accompany him. In case she made a mistake he would stop and correct her with loud curses. He refused his medicine and imagined that his nurses were trying to poison him. He would pound upon his abdomen as upon a drum; twist the bed clothes into ropes; laugh and talk quite sen-

sibly at times, and, all at once, would spring from the bed and attempt to flee away. The various visions which passed before him were described in a loud voice. He would see a beautiful castle surrounded by lovely gardens and magnificent parks; a dangerous black man hidden behind the stove; a fire into which he is to be cast; purgatory and a clock which strikes but once a century, the finger of which approaches the striking time, which he awaits with great anxiety. This continued for three days, when he entered upon a tedious convalescence and eventually recovered.[41]

In rare cases the mania may take on a homicidal or suicidal form. One of my cases presented the latter feature.

A nervous gentleman, aged 67, was taken, Feb. 12, 1886, with pneumonic fever, locally affecting the base of the left lung. On the third day delirium arose and soon developed into mania. At first he was an emissary from Christ, sent to evangelize the world, and he was continually preaching to vast audiences. All who heard him ceased their occupations and followed him from place to place—in number a countless multitude. Soon he began to doubt his abilities, motives and availability, and his discourses were interspersed with wild lamentations, self-condemnation and self-chastisement. This soon gave place to a profound melancholy from which he could not be aroused, and during the continuance of which he several times attempted suicide, generally with imaginary daggers and once by precipitating himself from the bed—an imaginary precipice—to the floor. On the thirteenth day he lapsed into a drowsy state from which he emerged rational two days later. Recovery ensued after a protracted convalescence.

A soldier, aged 20 years, sickened April 27, 1879. For a week he had slight fever and complained of headache and shooting pains in various parts of the body. The fever increased, his tongue became coated and there was developed cough, pain in the region of the zyphoid process, dullness on percussion and bronchial breathing at the base of the right lung. The fever continued and maniacal symptoms were developed on the 29th inst., on which day he attempted suicide. Death occurred on the following day, the mania continuing to the last. At the autopsy the base of the right lung was found hepatized and the brain edematous.[42]

Departure, in various directions, from these types are noticed.

A lady, 60 years of age, was taken with pneumonic fever, locally affecting the right lung. There was great dyspnea and she often said: "Kill me! I am suffocating." She finished every spoken sentence with a peculiar cry. On the tenth day she was very passionate, expressed a fear of becoming blind, had slight convulsions and was delirious at night. On the next day the right side was paralyzed, she was unconscious and passed her stools involuntarily. She remained in this state for days and died on the sixteenth day. At the autopsy two-thirds of the right lung was found in a state of gray hepatization.[43]

A young man, aged 19 years, suffered an attack of pneumonic fever, with crisis on the seventh day. For sixty hours all went well, when, suddenly there came on extreme dyspnea, with gasping, struggling, turgid face, staring eyes and profuse perspiration. He was quieted and relieved by moral suasion. On the following morning he had a similar attack, with dysphagia, apprehensive fright and violent trembling. He was again quieted and drank a glass of milk. Recurrent attacks occurred, with dilated pupils, excessive jactitation of the whole muscular system and a rise of temperature to 106 degrees, followed by death.[44]

Even in children the delirium may take the form of persistent delusions,[45] as occurred in one of my cases.[46]

Insanity may follow as a sequel, as in the following case:

A farmer, aged 42, had a severe attack of pneumonic fever in March, 1889. During the attack the mind was clear but at the end of the prolonged convalescence simple melancholia, with delusions developed. He had financial delusions; thought people were plotting against him; that he had lost the respect of his friends, etc. His speech was slow and hesitating. After six months there was progressive improvement.[47]

It is sometimes very difficult to draw the line of demarkation—which is at best an insensible and arbitrary one—between the milder forms of delirium and the operations of the rational mind. It may be said, however, that all outspoken images of the mind which are confused, unconnected and irrelevant are delirial aberrations of the intellect, and are due to an abeyance or destruction of the regulating powers of the reason. Delirium has been compared to dreaming, but it is much more profound and is due to different causes.

In pneumonic fever the delirium may depend upon an irritation of the cerebral organs from an increase or diminution of the blood supply to the parts; or it may be due to lesions of structure of these organs; or finally, it may depend upon a supply of blood to the brain lacking in proper nutritive or stimulating properties, or loaded with septic or noxious materials which preclude its nourishment or paralyze its functions. It is rare that the delirium is due to encephalic inflammation, although this was a common opinion of the older writers.[48]

Money,[49] in analyzing all the cases of delirious pneumonic fever occurring in the records of University College Hospital, London, found that pyrexia had but little influence upon the production of delirium. This coincides with the observations of Heinze[50] and myself.[51]

The gravity of delirium has been variously estimated by different authors.

Thus Laennec[52] did not consider even a furious delirium as denoting the presence of any great danger, although this was opposed to the views of Cullen[53] and the majority of observers, both before and since his time.[54] Gregory[55] was accustomed to state in his lectures that he had never known of but one pneumonic patient to recover after having had delirium, but this clearly can not apply to the experience of any other physician of much practice.[56]

My own observation has led me to the conclusion that very little need be feared when the delirium comes on early, especially if the patient is robust, or is predisposed to delirium under slight febrile provocation. On the contrary, if it comes on late in the course of the attack and is persistent, or if the patient is old, or enfeebled, or is a drunkard, the symptom is of the gravest import.

In a large number of cases with delirium there is developed a soporose condition or veritable coma which adds greatly to the gravity of the case. As a fact, the majority of the cases ending fatally and which are accompanied by delirium die comatose, although in some instances the mind temporarily regains its clearness shortly before death.

In the low, typhoid, or adynamic form of the disease the patient may be almost continually in the dreamy, half-waking state known as coma-vigil, or he may lay in a more or less profound coma. Coma may also be developed in those cases in which the blood fails in being properly aërated, and is surcharged with carbonic acid and effete materials which should be eliminated through the respiratory apparatus, and other channels, now not able to properly perform their functions. If the patient is the subject of diabetes, coma may be suddenly developed.[57] It is superfluous to state that any form of coma indicates a dangerous case.

When the coma is unconnected with organic cerebral disease it is less deep than when there is a brain lesion; continues two or three days and, if the case proves successful, subsides with the decline of the fever.[58]

Aside from the delirium the intellect is not so much interfered with as in most other diseases of equal gravity. Indeed, in many cases of the utmost gravity—even fatal ones—the mind is remarkably clear and penetrating, even to within a few moments of death.[59]

Sturges,[60] in commenting on one of his cases, makes use

of the following language: "The best feature of his case—which was a very grave one—was his acuteness of perception and attention to his own distress." With this I can only partially agree. That a patient should be sensible of his sufferings is indeed of good augury; but acuteness of perception in general has been so often associated with a fatal termination, in my experience, that I look upon the symptom, when it occurs in connection with others of gravity, with apprehension and dread."

There is usually considerable anxiety of mind, especially early in the attack. With all the anxiety the patient generally remains contented and hopeful, although he may be greatly depressed in spirit,[61] especially when under epidemic influences.[62]

In pneumonic fever there is about the same amount of restlessness and sleeplessness as in other febrile disorders of equal gravity. The restlessness is much more marked in the early stages of the attack than at a later period. At the height of the disease the patient, even a child, is usually quiet and tractable. There is usually a regular evening exacerbation, continuing far into the night, which interferes with sleep during the hours usually devoted to this purpose, although with this obstacle more sleep is generally obtained than is ordinarily supposed.

The patient and attendants will often inform the physician that little or no sleep has been obtained when such has not been the fact. Many times have I had an accurate record kept of the hours and minutes passed in sleep, showing that the patient was obtaining much—perhaps many fold—more sleep than had been estimated. When sleep is had only in short periods and is disturbed by sighs, groans, dreams and frequent awakenings there arises an erroneous impression of sleeplessness. It is, nevertheless, true that some patients pass several days with scarcely any sleep.[63] On the contrary, a few sleep more than in health, the sleep being peaceful and refreshing. Quite a considerable number of such cases are to be found in my collection. I have found them, with scarcely an exception, mild and tending toward recovery, and I consider the symptom of good import.

Convalescence is often ushered in by a prolonged and very profound sleep—a critical occurrence—from which the patient awakes, feeling that he has passed the danger line.

During convalescence, in many cases, the mind remains somewhat weakened, as is evidenced by irritability and restlessness on the one hand or too much contentment or apathy on the other.[64]

The increased blood pressure in the cerebral vessels in certain cases of pneumonic fever may lead to their rupture,[65] especially in the aged, followed by the ordinary symptoms of apoplexy, viz. hemiplegia,[66] aphasia and other paralyses.[67] Failure of the circulation may lead to cerebral softening[68] or abscess,[69] and these are not very rare accidents in this disease.

Inflammation of the cerebral[70] and cerebro-spinal[71] membranes, with effusion of serum, lymph or pus is a comparatively frequent occurrence.

It was present in 1.2 per cent. of 1,172 cases treated at the Zürich clinic;[72] in 12 per cent. of Kühn's cases in the Moringer epidemic;[73] in 16 per cent. of Louis' cases;[74] in 3.7 per cent. of Caton's eighty-five cases;[75] in 6 per cent. of the cases analyzed by Hermann;[76] and in 1 per cent. of the 8,000 Vienna cases.[77]

A negro, aged 28, was admitted into the Marine Hospital, Cairo, March 17, 1886, with pneumonic fever. Meningitis developed next day, and he died March 25. At the autopsy the right lung was found in gray hepatization, except a small portion at the base. There was intense congestion of the scalp and pia mater. There were deposits of lymph in the longitudinal fissure. The cortex was flattened and the texture softened in patches. A large quantity of serum was found in the ventricles and sub-arachnoid space.[78]

A widow, age 58, on the fourth day of an attack of pneumonic fever, locally affecting the upper lobes of the right lung, suddenly began breathing noisily, failed to answer questions, but soon recovered her senses. With the occurrence of occasional delirium she died on the seventh day—after having passed her urine and feces under her. The autopsy disclosed extensive purulent meningitis.[79]

In some cases the cerebral symptoms are so prominent as to mask the, perhaps equivocal and misleading, pulmonary ones. Under such circumstances care is requisite to avoid being led into diagnostic error. Thus in children, especially, there may be cervical rigidity, tenderness of the vertebræ, cephalalgia, projectile vomiting, intolerance of light and sound, etc., without the presence of meningeal inflammation.

Davis[80] has given us a vivid picture of one of a few cases witnessed by him at a time when cerebro-spinal fever was present in the same locality.

"The first symptoms were very severe pain in the head, most severe in the occipital region, with great restlessness and anxiety, hurried breathing, and only little elevation of temperature. After about twenty-four hours the pain drifted to the lower part of the chest, extremely acute, causing the respiration to be short or stifled, very frequent, and pulse sharp and quick; but the closest examination detected neither the friction of the first stage of pleurisy, nor the crepitant râle of pneumonia; nor the dullness on percussion of the second stage of either. After the pains in the side and the other symptoms mentioned, with temporary feeling of sinking had continued for nearly forty-eight hours, the pains ceased, the mind became calm, but the respiration continued short and frequent, like one weary from physical exertion, and giving exaggerated or puerile respiratory murmur, but no râles or dullness over any part of the chest, and no expectoration. During the next twenty-four hours, however, the patient became gradually more dull or drowsy, the respiration shorter, with first or crepitant râle over the right side of the chest, which gave place in less than eight hours to sub-mucous râles, some bloody expectoration, and marked dullness on percussion, with a weak and frequent pulse. In less than twenty-four hours after the first indication of pneumonic exudation, the whole of the right, and the lower part of the left, lung were completely filled with the exudative material and the patient died."[81]

It is a remarkable fact that in those cases in which there are cerebro-spinal symptoms, without actual inflammation, these symptoms decline with the greatest rapidity or cease abruptly with the advent of convalescence from the pneumonic inflammation.

A male child, 3½ years of age, was taken April 4, 1880, with fever, cough, thoracic pain, headache and the objective symptoms of pneumonic fever, locally affecting the bases of both lungs. There was marked spinal tenderness, retraction of the head, the characteristic cerebral cry, suffusion of the eyes, convulsions, etc. The disease pursued a severe course, and on the fourth day the temperature was 103.5 degrees, pulse 140 and respirations 40. The fever did not attain so great an elevation on the following day and defervescence occurred on the sixth day. The cerebro-spinal symptoms ceased abruptly and complete recovery ensued.

In children the cerebral symptoms are very often connected with dentition.[82]

A male child, age 8 months was taken, Jan. 25, 1889, with cough, diarrhea and febrile symptoms. On examination two days later, the base of the right lung was found hepatized. The general and local symptoms quickly subsided but on February 3, coldness of the extremities and vomiting ushered in high fever and hepatization of the left lung, which began below and gradually extended upwards until the entire lung became involved. The course of the disease was very severe, but after a week resolution commenced in the upper lobe and proceeded so slowly that it was not complete for a week. Resolution did not begin in the lower lobe until the sixteenth and was never completed. Dental irritation was noticed early in the illness and the two lower lateral incisors appeared during the second week, but irritation continued from other teeth, both upper and lower, with frequent febrile exacerbations. February 17, for a short time there were spasmodic contractions of the muscles of the right side, without impairment of function upon their subsidence. On the next day convulsions confined to the

right side, with paralysis of this side occurred and continued until death on the twenty-third, after five weeks of illness.

General convulsions, especially in children[89] are met with in a certain proportion of cases. Probably this does not indicate greatly increased danger[83] when it occurs early in the attack, but as a late symptom or in connection with other cerebral phenomena it is usually a forerunner of death. In some cases there are local or general muscular spasms,[88] especially in the low, adynamic or comatose forms of the disease.[84] Chorea,[85] epilepsy,[86] neuralgias,[87] and other so-called functional nervous affections are occasionally associated with pneumonic fever.[90] In two of my cases, in epileptics, the fits were held in abeyance by the pneumonic fever and did not reappear until convalescence was fully established.

A slight diminution of hearing, together with tinnitus[91] is sometimes present, but pronounced deafness is rare,[92] save in connection with typhoid fever, cerebral complication, obstruction of the Eustachian tubes[93] or middle ear inflammation.[94]

Every practitioner must have noticed with what frequency inflammation of the naso-pharyngeal mucous membrane accompanies pneumonic fever, especially in the young. The Eustachian tube, acting as a drain for fluids accumulating within the tympanic cavity and mastoid cells and as an equalizer of the atmospheric pressure within and without these cavities, affords a ready way for the extension of any inflammation affecting the naso-pharynx to the cavities at its other extremity. Otitis media is one of the most painful complications which can befall the pneumonic patient. In these cases the lateral sinuses are often involved, with a great increase in the danger.

Gull[95] has reported three cases in which this condition was present. The first was a man, age 21, who, after exposure to cold, had rigors, with pain in the right ear, extending over the side of the head and neck, and vomiting. Simultaneously there were developed the symptoms of pneumonic fever, complicated with pleurisy and pneumo-thorax. The patient died on the ninth day. The other cases were similar, with death on the twenty-first and twenty-fifth days, respectively.[96]

In these cases the pneumonic symptoms are very frequently overshadowed by those of the ear and brain[97] and are easily overlooked by a careless diagnostician.

I have encountered otitis media as a complication of pneumonic fever six times. Of these there were cerebral complications and fatal terminations in two, while four recovered. One of the latter cases well illustrates the series:

A healthy young woman, age 20, complained of slight deafness and pain in the right ear for two days, when she was awakened in the middle of the night by a severe chill and agonizing pain in the ear, which was greatly aggravated by a short, dry cough. High fever, alternating with rigors followed and the patient became rapidly so ill that her life was despaired of by her attendant. When I saw her on the second day she lay in a deep stupor, from which she would be aroused at intervals by the intense pain in the ear. Everything taken into the stomach was forcibly ejected. The head was retracted and the eyes suffused and dry. The respirations were short and hurried and during the acts the right side of the chest remained almost motionless. The pulse was 128 and the temperature 104.8 degrees. There was no cough, but there was dullness and tubular breathing over the right lung below the third rib. The drum membrane was punctured and exit given to a few drops of pus and the patient fell into a quiet sleep, from which she awoke complaining of pain in the right side of the chest. From this time she coughed and expectorated rusty sputæ. The aural pain did not recur, the discharge soon ceased and hearing was eventually, although slowly regained. The pneumonic fever pursued an ordinary course, with convalescence on the eighth day.[97]

The eyes usually remain unaffected. If there is much cerebral congestion they may be injected, with intolerance of light[98] and pulsation of the retinal vessels.[99] In the low forms of the malady there is often dryness of the conjunctivæ, or even conjunctivitis, from an anesthetic condition of the cornea. In some cases, especially infantile, the eyes are remarkable for their brightness and luster.[100] Subconjunctival hemorrhages, due to severe coughing are sometimes encountered—such cases being in my collection. The severe coughing may cause blindness, from intra-ocular hemorrhages, embolism,[101] etc. In some cases the cause of the blindness[102] may not be discovered.[103] The pupils are usually of normal size and responsive to light, but this is not invariably the case. They may be uni- or bi-laterally contracted or dilated and irresponsive to light,[104] especially with cerebral symptoms. Plastic iritis is a complication.[105] In rare cases herpetic vesicles appear upon the cornea,[106] usually in connection with labial or nasal herpes.

There is sometimes a dryness of the Schneiderian mucous membrane, especially in children, with a tendency toward picking at the nose. This may be noticed in an early stage of the attack or it may appear later in connection with the typhoidal condition. Following such dryness there may be a discharge from the nose, which is of good omen. In the early stages,[107] and with the advent of convalescence sneezing is not uncommon. The latter is often one of the first indications of the advent of convalescence and should be viewed as of good import.[108] Aretæus[109] thought that the point of the nose was elevated in this disease, but I have never been able to appreciate the fact—if fact it be.

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1 See Fox, Reynolds' Syst. Med., Phila, 1880, Vol. ii, p. 172;—Juergensen, Ziemssen's Handb. d. Spec. Path. u. Therap., Bd. v, 1877, s. 124;—Lépine, Pneumonie, Wien, 1883, s. 76;—et al.

2 See also Davis, N. W. Med. Jour., Vol. iii, p. 425;—et al.

3 Op. cit., s. 124.

4 Waller, Inaug. Diss., Erlangen, 1877, s. 20.

5 Knight, Jour. Am. Med. Assn., June 19, 1886, p. 690. It was an early symptom in one case of Leyden's—Volkmann's klin. Vostrage, No. 114 u. 115, s. 1003.

6 U. S. Marine Hospt. Rpts., 1887, p. 245.

7 See Cleghorn, Diseases of Minorica, London, 1761, p. 261;—Peacock, St. Thomas' Hospt. Rpts., 1875, Vol. v;—Sprague, Rpt. Maine Bd. Health, 1885, p. 214;—et al.

8 London Lancet, 1884, Vol. ii, p. 134.

9 Pneumonie, Leipzig, 1841, s. 146.

10 Lungenentzündung, München, 1880, s. 36.

11 N. Y. Med. Rec., April 7, 1888, p. 385.

12 Med. Clinic, Phila., 1843, Vol. ii.

13 Quoted by Fox, Op. cit., p. 172.

14 Inaug. Dissert., Bréslau, 1881, s. 53.

15 Arch. d. Heilk., 1868.

16 Phila. Med. News, Jan. 5, 1889, p. 5.

17 Lungenentzündung, Leipzig, 1861, s. 40.

18 Arch. gén. de med., T. xi.

19 Lépine, Pneumonie, s. 135, considers delirium rare in France.

20 Med. Times and Gaz., Jan. 29, 1848.

21 Chomel, Op. cit., s. 148, in his experience met with delirium oftenest in females.

22 None of my female patients were addicted to the immoderate use of alcoholic liquors.

23 See Copland, Med. Dict., N. Y., 1855, Vol. ii;—Hall, St. Bartholomew's Hospt. Rpts., 1875;—Heinze, Arch. d. Heilk., 1868, Bd. ix;—Huss, Op. cit., s. 41;—Green, Quain's Dic. Med., N. Y., 1883, p. 877;—Grisolle, Traité de la Pneumonie, Paris, 1864;—Fox, Op. cit., p. 173;—Juergensen, Op. cit., s. 128;—et al.

24 See also Huss, Op. cit., s. 41;—Juergensen, Op. cit., s. 128;—Lépine, Pneumonie, Wien, 1883, s. 135;—et al.

25 See Cleghorn, Op. cit., p. 261;—Dutcher, Cin. Lan. and Obsv., Jan., 1861, p. 10;—Heller, Deutsches Arch. f. k. Med., Bd. v.;—Huxham, Epidemic Diseases, London, 1748, Vol. ii;—Louis, Fiev. Typh., T. i, p. 339, et T. ii, p. 37;—Speck, Inaug. Dissert., Marb., 1870, s. 41;—Weber, Path. Anat. d. Neugeb., Bd. ii, s. 163;—et al.

26 Boldt, N. Y. Med. Rec., July 16, 1887, p. 85;—Holt, Op. cit.

27 Charcot, Dis. of old Age, N. Y., 1881, p. 28;—Huss, Op. cit., s. 41.

28 Andral, Op. cit.;—Briquet, Ranking's Abst., 1848, No. 7, p. 49;—Grisolle, Op. cit.;—Heinzé, Op. cit.;—Juergensen, Op. cit., s. 122;—Holt,

N. Y. Med. Rec., April 7, 1888, p. 387. Huss, Op. cit., s. 40, says that he has not found delirium more prevalent in those cases in which the upper, rather than other, lobes are affected.

29 See Smith, N. Y. Med. Rec., July 16, 1887, p. 85;—Sturges, Pneumonia, London, 1876, p. 66.

30 Andral, Op. cit., p. 120.

31 See Holt, Op. cit.;—Speck, Op. cit., s. 27.

32 Luckie, Am. Jour. Med. Sci., Vol. viii, p. 354.

33 See Aretæus, De Caus. et Sig. Acut. Morb., Lib. ii, Cap. i;—Cœlius Aurelianus, Acut. Morb., Lib. ii, Cap. xxv-xxix;—et al.

34 See Andral's—Op. cit., p. 158—case.

35 See Robb, Jour. Am. Med. Assn., Nov. 28, 1885, p. 614.

36 See Brunton, Mat. Med. and Pharmacol., Phil., 1885, p. 654. It may appear late, as in the case reported by Haw, London Lancet, 1887, Vol. ii, p. 911.

37 See Huss, Op. cit., s. 41;—Juergensen, Op. cit., s. 128;—Lasègue, Arch. gén. de med., 1869;—Samter, Inaug. Dissert., Breslau, 1881, s. 53;—Schapira, Inaug. Dissert.;—Stortz, Inaug. Dissert., Würzb., 1884, s. 65;—Townsend and Coolidge, Trans. Am. Climat. Assn., 1889.

38 Bartholow, Holmes' Syst. Surg., Phila., 1884, Vol. i, p. 582.

39 For further information see Barlow, London Lancet, 1884, Vol. i, p. 9;—Doubleday, N. Y. Med. Rec., March 28, 1885, p. 343;—Fox, Op. cit., p. 173;—Huss, Op. cit., s. 56;—Lasègue Arch. gén. de med., 1869;—Lépine, Op. cit.;—Sturges, Op. cit.;—Peacock, Op. cit.;—et al.

40 Barlow, Op. cit.;—Caton, Op. cit., p. 137;—Grisolle, Op. cit.;—Sturges, St. George's Hospt. Rpts., Vol. i, p. 343. See case by Kempf, Med. and Surg. Reporter, June 10, 1893, p. 894.

41 Eidam, Berliner k. Wochenschr., 1884, s. 185.

42 Hermann, Lungenentzündung, München, 1880, s. 34.

43 Liman, London Lancet, N. Y., 1882, Vol. i, p. 83.

44 Lester, N. Y. Med. Rec., July 21, 1888, p. 65.

45 See cases by McMurtry, Jour. Am. Med. Assn., April 26, 1884, p. 464, and Lyman, Phila. Med. News, May 9, 1891, p. 519.

46 For further information on this subject see Bowditch, Boston Med. and Surg. Jour., May 24, 1877, p. 623;—Ellis, Ibid.;—Rep. West Virginia Hospt. for Insane, 1875, pp. 17, 20 and 21;—Lees, London Lancet, 1889, Vol. ii, p. 892;—Holfelder, Inaug. Dissert., Tübingen, 1884, s. 6;—Lyman, Phila. Med. News, May 9, 1891, p. 519.

47 Osler, Johns Hopkins Hospt. Repts., Vol. ii, p. 46.

48 See Andral, Op. cit., p. 122.

49 Jour. Am. Med. Assn., July 3, 1886, p. 25.

50 Arch. d. Heilkunde, 1868.

51 Heinze—Op. cit.—found that delirium was most common during the cooler portions of the year, but my records do not confirm this opinion.

52 Diseases of the Chest, N. Y., 1830, p. 223.

53 Prac. Physic., Phila., 1792.

54 See Flint, Prac. Med., Phila., 1868, p. 179;—Forbes, Laennec's Dis. Chest, p. 223;—Fox, Op. cit., p. 173;—Grisolle, Op. cit., Lommius, Obsv. Med., Vol. ii, p. 136;—Watson, Prac. Physic., Phila., 1845, p. 580.

55 Quoted by Forbes, Op. cit.

56 See Money, Op. cit.;—et al.

57 See Ebstein, Deutsche Med. Wochenschr., Bd. xxviii;—et al.

58 For further information see Doubleday, N. Y. Med. Rec., March 28, 1885, p. 343;—Humphreys, London Lancet, 1887, Vol. ii, p. 1109;—Samuels, Med. Press and Circular, 1887;—Strauss, Rev. Mensuell, 1877;—Speck, Inaug. Dissert., Marb., 1870, s. 11;—Fonts in Cleghorn's Epidem. Diseases, Minorica, s. 263;—et al. See also Fox, Op. cit., p. 183;—Sturges, Op. cit., p. 120;—Swett, Diseases of the Chest, N. Y., 1856, pp. 91 and 105.

59 Op. cit., p. 120.

60 Aretæus, Op. cit.

61 Cleghorn, Op. cit., p. 261;—Rosse, Cruise of the Corwin, Wash., 1883, p. 16;—and many others. See Wells, Jour. Am. Med. Assn., Feb. 23, 1889, p. 258;—et seq

62 Ziemssen, Pleuritis u. Pneumonie, Berlin, 1862, s. 166.

63 See Aretæus. Op. cit.;—Cœlius Aurelianus, Acut. Marb.;—Hippocrates, Opera Omnia;—Lépine, Op. cit., s. 76;—Rosse, Op. cit., p. 16;—and others, ancient and modern. Homburger—Inaug. Dissert., Strassb., 1879, s. 56—gives the case of a patient who obtained no sleep for several days.

64 See also Hopf, Jahresbericht, 1870, Bd. ii, s. 123.

65 See Bartholow, Prac. Med., p. 512;—Copland, Med. Dic., N.Y., 1855, Vol i, p. 105;—Strauss, Rev. Mensuell, 1877.

66 Charcot, Diseases of old Age, N. Y., 1881;—Gubler, Arch. gén. de med., 1860;—Hervey, Bull. Soc. Anat., 1873;—Jaccoud, quoted by Lépine, Pneumonie, Wien., 1883, p. 138;—Lépine, Op. cit., Thèse de Paris, 1870, et Mém. de la Soc. des hôp., Paris, 1876;—Stephen, Weekblad, 1888.

67 Barth u. Poulin, quoted by Lépine, Pneumonie, s. 138;—Gubler, Arch. gén. de med., 1860-61;—Macario, Gaz. méd. de Paris, 1858;—Fox, Op. cit., p. 183.

68 Doubleday, Op. cit., p. 343;—Rostan, Du Ramollissement Cèbrébrale, 2d edition, p. 232;—Strauss, Op. cit.;—et al.

69 See Brechemin, Boston Med. and Surg. Jour., July 14, 1881, p. 39;—Brooks, London Lancet, Feb. 2, 1889, p. 216;—Delioux, Gaz. méd. de Paris, 1857, No. 39;—Samuels, Med. Press and Circular, 1887;—Swett, Op. cit., p. 93;—et al.

70 See Caton, Op. cit., p. 137;—D. C. Bd. Health Rpt., 1878, p. 115;—Huss, Op. cit.;—Kuhn, Arch. f. k. Med., Bd. xxi;—Humphreys, Op. cit., p. 1109;—Lépine, Op. cit., s. 158, Thèse de Paris, 1870;—Nauwerck, Arch. f. k. Med., Bd. xxix, s. 1;—Purser, Dublin Jour. Med. Sci., December, 1873;—Roosevelt Hospt. Rpts., 1879, p. 28;—Strauss, Op. cit.;—Surugue, Thèse de Paris, 1875.

71 Dalton, Jour. Am. Med. Assn., Sept. 24, 1887, p. 410;—Doubleday, Op. cit., p. 343;—Fagge, Prac. Med., 1887;—Maurer, Arch. f. k. Med., Bd. xiv;—Smith, N. Y. Med. Rec., May 14, 1887, p. 543;—et al.

72 Nauwerck, Op. cit., s. 1.

73 Op. cit.

74 Am. Jour. Med. Sci., Vol. xiv, p. 199.

75 Op. cit., p. 137.

76 Op. cit., s. 22.

77 Caton, Op. cit., p. 136. See also Homburg, Inaug. Diss., Strassb., 1879, s. 97;—Huguenin, Ziemssen's Handb., Bd. xi, s. 374;—Huss, Op. cit., s. 132;—Irvine, London Lancet, 1889, Vol. ii, p. 370.

78 U. S. Marine Hospt. Rpts., 1886, p. 204. For a very interesting case see Reports for 1887, p. 205.

79 Homburg, Op. cit., s. 97.

80 Jour. Am. Med. Assn., Oct. 13, 1883, p. 415.

81 See also Condie, Watson's Prac. Med., Phila., 1845, p. 611;—Parks, N. W. Med. Jour., Vol. i, p. 461;—Runeberg, Berliner klin. Wochenschr., 1888, s. 921-946;—et al for similar cases.

82 See Friedleben, Arch. der Heilk., 1857;—et al.

83 See Doubleday, N. Y. Med. Rec., April 7, 1888, p. 385.

84 See case, U. S. Marine Hospt. Rpts., 1887, p. 245.

85 See case, Weller, Inaug. Diss., Zürich, 1854, s. 423;—Schapira, Inaug. Dissert, s. 34;—Kunze, Lebrb. d. prac. Med., 1873, Bd. i, s. 155;—Ziemssen, Spec. Path. u. Therap., Bd. ii, s. 437.

86 An epileptic under my care dated the beginning of his affection to a previous attack of pneumonic fever.

87 See Wilbrandt, Inaug. Diss., Rostock, 1862, s. 28.

88 See Preston, N. Y. Med. Rec., March 30, 1889, p. 343;—Speck, Inaug. Dissert., Marb., 1870, s. 11;—Weber, Path. Anat., Bd. ii, s. 61;—Fox, Op. cit., p. 173.

89 Especially in dentition.

90 Wunderlich—Inaug. Dissert., Tüb., 1858, s. 15—reports one case in which, on the twenty-second day, transient formications and anesthesia occurred, and another in which there was anesthesia of the throat and neck.

91 Waller, Inaug. Diss., Erlangen, 1877, s. 20.

92 Bleuler, Inaug. Diss., Zurich, 1865;—Fox, Op. cit., p. 174;—Griesinger, Virchow's Handb., Bd. ii;—Hillier, Dis. of Children, p. 40.

93 Chomel, Pneumonie, Leipzig, 1841, s. 145;—Ray, Ohio Med. Recorder, April, 1881, p. 498;—Upshur, Phila. Med. Exam., 1845.

94 Baginsky, Pneumonie, Würsb., 1880, s. 46;—Chomel, Op. cit., s. 168;—Dietz, N. Y. Med. Rec., March 17, 1883, p. 290;—Koettnitz, Inaug. Diss., Halle, 1882, s. 79;—Lees, Practitioner, Aug., 1886;—Peacock, Op. cit.;—Sinclair, London Lancet, N. Y., 1881, Vol. i, p. 313;—Steiner, Diseases of Children;—Duckworth, London Lancet, Jan. 5, 1889, p. 1;—et al.

95 London Lancet, N. Y., 1855, Vol. i, p. 515.

96 See also cases by Duckworth, London Lancet, Jan. 5, 1889, p. 1;—Schupoff, Ibid, N. Y. edition, 1855, Vol. i, p. 516;—et al.

97 See Peacock, Ibid., p. 516.

98 See also Cincinnati Lancet and Clinic, June 10, 1882, p. 504.

99 See Chomel, Op. cit., s. 145;—et al.

100 Fox, Op. cit., p. 174;—Lépine, Op. cit., s. 140;—Loring, N. Y. Med. Rec., Dec. 31, 1887, p. 820;—Seidel, Deutsche Klinik, 1862, s. 269;—Sichel, Gaz. des hôp., June, 1860;—et al.

101 They may appear sunken. Wittich, Pneumonie, Erlangen, 1850, s. 13.

102 See Thompson, Jour. Am. Med. Assn., July 24, 1886, p. 92.

103 Cataract followed in one case reported by Colburn, Jour. Am. Med. Assn., June 4, 1887, p. 619.

104 Gerhard, Am. Jour. Med. Sci., Vol. xvi, p. 328;—Seidel, Op. cit.;—et al.

105 Holt, Op. cit.;—Lépine, Op. cit., s. 76;—Seidel, Op. cit.;—Rogue, Mém. Soc. de Biol., 1869, p. 140;—Strauss, Rev. Men. de Méd. et de Chir., 1877, t. i, p. 749;—Seeligmüller, Deutsche Arch., f. k. Med., Bd. xx, s. 110;—Stortz, Inaug. Dissert., Würzb., 1884, s. 66;—Schreiber, Deutsche Arch., f. k. Med., Bd. xx, s. 55;—Homburger, Inaug. Dissert., Strassb., 1879, s. 83.

106 See case by Money, Lancet, 1890, Vol. ii, p. 818.

107 Horner, Klin. Monatsbl., 1871, s. 321;—Luckie, Am. Jour. Med. Sci., Vol. viii, p. 354;—Wells, Diseases of the Eye, Phila., 1880, p. 136.

108 This was a marked feature of the Plague of Athens and other epidemics. Thucydides, Opera.

109 See Friedleben, Arch. d. Heilk., 1847, s. 170;—Ziemssen, Op. cit., s. 230.

110 Op. cit.

REGISTRATION OF TUBERCULOSIS.

Special meeting of the College of Physicians and Surgeons of Philadelphia, held Jan. 12, 1894, the President, S. WEIR MITCHELL, M. D., in the Chair.

TO CONSIDER THE PROPOSED ACTION OF THE BOARD OF HEALTH IN REFERENCE TO THE REGISTRATION OF TUBERCULOSIS.

The Council to which the resolution and amendment with reference to the proposed action of the Board of Health concerning tuberculosis were referred, offered the following resolution to the College:

Resolved, That the College of Physicians believes that the attempt to register consumptives and to treat them as the subjects of contagious disease would be adding hardship to the lives of these unfortunates, stamping them as the outcasts of society. In view of the chronic character of the malady, it could not lead to any measures of real value not otherwise attainable.

That strict attention on the part of physicians in charge of the individual cases, insisting on the disinfection of the sputum and of the rooms, on adequate ventilation, and on the separation of the sick from the well as far as possible, will meet the requirements of the situation so far as they practically can be met, and better than any rules that, for diseases so chronic, can be carried out by a Board of Health.

That the College of Physicians respectfully requests that no official action be taken in the matter by the Board of Health, except the insisting on the disinfection of rooms in which consumptives have lived and died, in instances in which such procedure is not likely to have been adopted under the direction of the attending physician.

Discussion.

DR. OWEN J. WISTER—When I offered my resolution at the December meeting of the College it was objected by those who are in favor of registration of cases of consumption that nothing was intended beyond registration, in order that medical literature of a kind to warn persons of danger might be sent to their houses. In a paper read before the Pan-American Medical Congress on "Tuberculosis," and published in the *Medical News* of Oct. 21, 1893, there is a good deal more in reserve which is insisted upon.

Registration, in the first place, is meant to include the residences of all persons affected with pulmonary tuberculosis,

and even if the place of residence is temporarily changed it must be by and with the consent and knowledge of the Board of Health.

As to the literature, so-called, I think that is of doubtful desirability. Those who spent the summer of 1892 in town, when there was a cholera scare, will remember that there was a great deal of this sort of literature—the papers reeked with it. The evening papers published articles of such a sensational character that the Health Officer was lashed into such a state of hysterics as to propose a quarantine against New York, under the act of Legislature which makes such a proceeding lawful when a contagious disease is "raging in a neighboring city." The "rage" in this case amounted to four cases in a population of a million in a month. This proposition, however, was not adopted. But while the Board of Health was thrown into spasms of terror, there was enough that was ludicrous in this literature to throw the community into spasms of laughter, and we had a rather cheerful summer. It can not be hoped that this view will always be taken when, instead of a scare of two or three weeks, it will last ten or fifteen years, while from forty to fifty are dying a week. It is then possible that this literature may lash the whole community into a panic,and that instead of regarding the unfortunate victims of consumption as objects of compassion they will be looked upon as peripatetic fountains of danger, and a feeling of hostility to them will arise. This may last for years, for during the whole period of softening they are regarded as sources of danger. In fact, they are to be treated as criminals guilty of consumption. As I said before, their residences, however temporary, are to be disinfected and their miserable lives are to be rendered more wretched by being haunted by the familiars of the inquisition. It is asserted that if these radical measures are carried out tuberculosis will be eradicated in a few years; of that, it is said, there is no doubt. Now no other contagious disease has ever been extinguished,even with the added protection of vaccination in smallpox. Those of us who are not in the intimate confidence of Nature find it difficult to understand how an hereditary disease can be eradicated by measures which only limit its spread by contagion; and if it is not hereditary, whence come those forms of tuberculosis other than pulmonary? It can not be pretended that babies, a year or two old, get tubercular meningitis by contagion, nor can white swelling, nor suppurating glands, nor the many other exhibitions of scrofula come from contagion. I think very few of us will concur in this sanguine expectation. There are several other suggestions: one is likely to be very popular; it is that all persons working in factories and the like who are affected with pulmonary tuberculosis, in the softening stage, shall be withdrawn and, when necessary, supported by pensions. In this country we have a large experience of pensions; pensions have bankrupted the treasury of the United States. It is easy to believe that people unwilling to work could get the necessary certificate from some two-penny doctor and be supported by the State. As to the more serious part of the matter, the treating of persons so unfortunate as to have pulmonary tuberculosis, as criminals guilty of consumption, is something so frightful that I implore the College to interpose its remonstrance against such an outrage on common sense and common humanity.

Dr L. F. Flick—Together with other Fellows, I would like to bring up the entire subject for discussion, and, without wishing to find fault with Council in referring back the resolution in amended form, I should like to offer a substitute, which will bring up both registration and special hospitals for the treatment of the consumptive poor. The substitute is as follows:

Whereas, Tuberculosis is now known to be a contagious disease; and

Whereas, The methods by which the disease is conveyed from the sick to the well are now clearly understood; and

Whereas, It has been shown that the room which is occupied by a consumptive during the infectious period of the disease, and the furniture and the bedclothing which have been used by him, become infected and are liable to convey the disease to others who may occupy or use them subsequently; and

Whereas, Tuberculosis, owing to its long duration, cripples the bread-earning capacity of the family, when it occurs among the poor, to such an extent that the want and hardships which follow in its wake prepare the healthy members of the family for the disease; therefore be it

Resolved, That we recommend to the Board of Health of the City of Philadelphia the registration and disinfection of houses which have been infected by tuberculosis;

Resolved, That we recommend to the City Council of the City of Philadelphia the establishment of a Municipal Hospital for the treatment of persons suffering from tuberculosis.

The question of contagion seems to be admitted, and can, therefore, be eliminated from the discussion. I will then take up the question of prevention.

In reply to what has been said by Dr. Wister, I may state that the paper from which he quoted was a scientific paper covering the entire subject. He ought to have told you that the author pleads in that paper only for a beginning in preventive measures.

The contagion of tuberculosis being admitted, what measures are necessary for its prevention? The careful investigation of this subject from many points of view by Dr. Cornet, Dr. DeForest, and myself, show beyond doubt that there is a local infection—that the consumptive in his home is bound in his ordinary daily life to infect his room, the furniture, and the bedclothing. The experiments made by Cornet illustrating this subject are most elaborate. They covered a period of two years, during which time he perseveringly followed out his line of research. He examined the dust gathered from the floor, the walls of the room, the bedposts, and the bedclothing of persons in advanced stages of consumption confined to their beds. He found by inoculation with this dust that he was able to produce tuberculosis. He found, moreover, that where a patient was so sufficiently intelligent and obedient to follow the instructions to always spit in the sputum-cup and never into a handkerchief or on the floor, inoculation with the dust produced no effect; but where the patient occasionally spat into a handkerchief, or into a nook in the room, inoculation with dust from the surroundings of these places was effective. He was able to demonstrate that in proportion to the obedience and cleanliness of the patient the extent of the infected environment decreased. Where the patient was cleanly and took ordinary precautions, but not absolute precautions, the infection extended to only a limited space, possibly four or five feet. Where the patient was uncleanly and spat indiscriminately, not only the bed-posts and the floor but also the walls were capable of conveying the infection. The clinical investigations which I made in this city, and some illustrations of which I shall throw upon the screen, and the clinical investigations made by Dr. DeForest in New Haven, corroborate these results in such a way that their meaning can not be misunderstood.

I wish here to refer briefly to the results which I obtained in my investigations in the Fifth Ward of this city, and I shall throw on the screen sections of a map. This Ward contains 16,000 people and has 3,500 houses. I have tabulated the deaths from tuberculosis during twenty-five years:

Slide No. 1 shows probably the least infected section of the Ward. There were comparatively few deaths from consumption in this section. Where deaths are noted, they occur in groups—that is, in adjoining houses.

Slide No. 2. In this section some of the houses have had a number of deaths, while the majority are free.

During the twenty-five years there were 1,500 deaths from tuberculosis in the entire Ward, and they occurred in 650 houses.

Slide No. 3. This shows a section of the city inhabited largely by the colored race. Here the houses that have had the disease have had it frequently recurring. In this small street there is a house in which there have been deaths in five different families in succession, all the deaths occurring within a few years. I was recently called to visit a rabbi in this house, who had never lived in any other house in the city. He moved in in perfect health and in six months contracted the disease. Many of the other houses tell the same tale.

Slide No. 4. This section tells the same story. The houses that are infected have a large number of cases in succession. These cases have not always been in the same family, but have frequently recurred in different families.

Slides Nos. 5, 6, 7 and 8 show the same state of things.

Slide No. 9 shows a map of New Haven, showing the deaths during seventeen years, which was prepared by Dr. DeForest. His conclusions are exactly the same as mine. He found one interesting fact which I was not able to find, because I did not have the entire city. He found that the most populous districts are almost entirely free. In the First Ward, with thirty inhabitants to the acre, there were scarcely any deaths, while in one section which has a large mortality the population is only six to the acre. That proves conclusively that crowding does not entirely explain the death rate.

Slide No. 10 gives a section of New Haven, and shows the

same grouping as by map. It shows the recurrence of the disease in the same way as in the Fifth Ward of this city.

Now this evidence of infection and retained infection of houses, together with the demonstrations made by Cornet, can point only to one conclusion, and that is, that the houses which have been inhabited by a consumptive for a given period will retain the infection and convey it to others. I have investigated quite a number of cases which illustrate the same point. I have knowledge of a telegraph office down in Maryland in which five consecutive operators contracted tuberculosis and died. The results in these five cases were so striking that people became superstitious in regard to the office. I have been informed by a person who saw the office that the consumptives had spat around the office and that it was lined with tubercular sputa. I have been able in this city to trace a great many cases where persons innocently moved into houses, unsuspicious of any infection, and where within six months a member of the family who was healthy before has taken the disease, and this case has been followed by others.

Dr. DeForest mentions a very striking result of his investigations in New Haven. He investigated the histories of 100 cases coming to the medical clinic of the city, and found that 52 were living in infected houses. In 1888 I carefully examined the deaths that occurred in the Fifth Ward during that year. There were 83 *bona fide* deaths from consumption. Although out of the 3,500 houses only 650 were infected, two-thirds of these cases occurred in these infected houses. Of the remaining third a large number had lived in infected houses and had changed their residences, so that apparently more than two-thirds of the cases in which death occurred in 1888 had contracted the disease while living in infected houses.

If the facts I have related are true, how is it possible to institute any practical preventive measures without registration? The education that is spoken of in the resolutions offered by Council will not accomplish much. Cornet has shown that even when the patient has carried out most of the instructions, the immediate surroundings are infected. As you are well aware, among the very poor there is no nursing. The consumptive is apt to lie on a bench in the kitchen—a small room, perhaps eight by twelve feet. He had to wait on himself, and probably spits everywhere. Under such circumstances he is bound to infect the room, and it has been shown that the disinfection of such a room does not consist in burning sulphur, but special methods are required. One of the most efficient methods is rubbing down the walls with dry bread and then washing with carbolic acid or some other powerful germicide. The furniture and the bedding also require disinfection. You well know that the houses in which the poor live are owned by men who are trying to get as much money as possible out of them. The owners will not disinfect these houses if they can avoid it. It is only by the authority of the Government that this disinfection can be accomplished.

Now, is the profession ready to step forward and say: "We will make an earnest effort to stamp out tuberculosis?" The profession throughout the country has said that it will. The American Public Health Association, during its session in Chicago, adopted resolutions asking that registration should be practiced. The Section on Hygiene of the Pan-American Medical Congress adopted similar resolutions. The Congress of Tuberculosis in Paris, in 1888, passed resolutions asking that tuberculosis be recognized as a contagious disease, and in 1891 passed a resolution asking that disinfection be practiced.

Will disinfection have any effect? It will. I should like to cite one illustration: As far as I know, Berlin is the only city that has taken scientific precautions against tuberculosis. The result is most encouraging. In the city of Berlin there has been a marked reduction in tuberculosis from 1884 to 1891, the most rapid reduction of any city of which I can obtain statistics. In Philadelphia there has been a reduction. In London there has been a vast reduction since the establishment of consumptive hospitals fifty years ago. In Berlin there has been the most rapid reduction; from 1884 to 1891 there has been a reduction of 0.644 per 1,000. In 1884 the mortality in Berlin was 3.45 per 1,000, and in 1891, 2.811 per 1,000. In Philadelphia, where we have been priding ourselves on the reduction, there has been in ten years only a reduction of 0.623 per 1,000. Whether or not registration is being enforced in Berlin I do not know. I have been told by private parties that it is. Contrasting the reduction in Berlin with the reports from other cities, we find that the mortality in Paris was about the same in 1890 as thirty years prior—4.574 per 1,000. Whether or not France will succeed in establishing preventive measures is yet to be known. I have had no definite information on the subject.

As to the sentiment on this question, it is all on the side of registration. I grant that it may be hard for wealthy people to be recorded as suffering from tuberculosis, but this is a disease of the poor; the vast majority of consumptives are very poor, and the necessities of the poor so demand registration that it should outweigh the sensitiveness of the rich. But the sensitiveness of any one can be overcome by the suggestion embodied in the resolution I offered, a suggestion which was made to me by Dr. James C. Wilson—that is, instead of registering the individual to register the infected house. It would not then be necessary to register tuberculosis among the wealthy, as only houses that had been infected would have to be registered. Where infection can be prevented by proper sanitary measures, there would be no occasion for registration. This would enable us to register those houses that need to be disinfected.

The best place to study this subject is among the poor. It is there that I have learned my lessons. I am satisfied that every man here will reach my conclusions if he will go among the very poor and study this question at the bedside, and see how, one by one, these people die from the disease because they are unable to protect themselves and because, in the endeavor to protect and supply medicine to the stricken one, the healthy fall victims to the disease. It is these who need aid. The College of Physicians should now take a firm stand and do something in aid of these people. It is not necessary to do everything at once. Let us make a beginning. Experiments have been made; let us now come to action. It is not fair to the public that the medical profession, with the knowledge it possesses, should do nothing. The laity can not act because they have not the knowledge. If we, who have the knowledge, do nothing, we are certainly responsible for the deaths of those who otherwise might be saved.

DR. J. M. DA COSTA—Let me say, in the first place, that I thoroughly admire the enthusiasm which Dr. Flick has for years brought to the study of this question. I think the way in which he has gone about this work is in every respect most commendable, and in its spirit and scope this is one of the best series of observations with which I am acquainted. If I differ with him it is rather in the conclusions than in reference to his mode of investigation and his aims.

When we speak of contagion in consumption, we can not mean that it is markedly contagious. There is no proof that it is. It is not contagious like typhus fever, or smallpox, or scarlet fever, or diphtheria. It is only slightly contagious. It is, indeed, so slightly contagious that some of our best thinkers with the largest fields of observation, notwithstanding the evidence that has been adduced, still hold that it is not contagious at all. For instance, if we take the opinion of a man so long connected with the Brompton Hospital as Dr. Williams, we find in the last edition of his work on "Pulmonary Consumption," that he maintains that no more deaths from consumption occurred in the attendants of the Brompton Hospital than occurred among the same number in ordinary life. The evidence of Dr. Andrew, of the Victoria Park Hospital is in the same direction. When we look at the conclusions of these men and at those of Wilson Fox and many others, it is going too far to assume that the whole profession admits the disease to be contagious.

That it is moderately so, and that it can be communicated under exceptional circumstances, I firmly believe; but that we should regard it as a very contagious disease and take all the precautions that we do in such diseases, I deny. If it be contagious, it is contagious, as every one admits, chiefly through the sputum. Is it to be understood that an inspector from the Board of Health is to come daily to take care of the sputum cup? Is not the intelligent physician the proper health officer? Is not what he says sufficient, and can he not advise and enforce the destruction or the disinfection of the sputum as well as any public officer? Finding bacilli in the bedclothes and on the bedstead, and destroying them, will not eradicate consumption. Tubercle bacilli are widely diffused. They are in the dust of the air we breathe, blown about from the dried sputum of consumptives in the street. They have been demonstrated to exist on the fruit sold in our markets; they are in milk. They may, indeed, be said to be everywhere; and not only in the homes of consumptives. They have been found in churches, in places of amusement. Where will you draw the line as to watching and interfering with the life of the consumptive? Must we not take the broader view, and act on the degree of the communicability, and how far it is practicable to control

it,rather than on the mere abstract question whether tuberculosis be contagious or not? The degree, every observer knows, is extremely slight.

The excellent series of observations about the houses is, I believe, subject to several fallacies. In the first place, unless you know the history of the persons themselves, these observations on the houses supposed to be infected are not conclusive. You must know whether or not the individual inherited tuberculosis. I am one of those who believe that the disease is largely hereditary. Of what use is it to say how many living in these houses die of consumption unless you know the history as well as the number of those who have occupied them?

Again, we should bear in mind when discussing the contagiousness of phthisis, how enormously prevalent the disease is, and how difficult it is to draw conclusions when you have the most prevalent chronic disease to deal with. As bearing upon the question of infection from husband to wife, it has been calculated by Longstaff as a mere matter of statistics without reference to the question of contagion, that of every 148,121 men who die of consumption in the ages of married life, there would be 4,358 wives who would have consumption—that is, about 1 in 33. Thus, for every thirty-three married men who die of consumption there would be one woman have it, as a mere matter of ordinary frequency, whether the disease be contagious or not, and the probability would be a little more for phthisical wives. The number of cases seen in which both husband and wife have been affected is comparatively small. Flint, in over 670 cases, noted but five such instances. My record shows more such instances, including one where a tubercular husband had three tubercular wives. Still I have not met with very many, and the chances are always slight that the husband communicates the disease to the wife, or the wife to the husband. When we take all the facts into account, as well as the strong hereditary tendency of the malady, we must be careful how we draw conclusions in individual instances of apparent contagion.

Mindful of the observations of Dr. Flick, I have for some time questioned myself with reference to houses that I have known for years in which there has been consumption. But I have not taken them in one district, but everywhere. And this seems to me a much fairer way of studying the question, as the indiscriminate selection obviates the likelihood of error from bad hygienic conditions, especially of drainage, that houses near each other might share.

I have many houses in mind in which no case of consumption followed the first. In one, the father died of a slow consumption twenty years ago. The mother is, as regards tubercle, perfectly healthy to this day. The seven children have grown up into exceptionally healthy young men and women. In another house the wife died of consumption about eighteen years ago. The husband continued to live in the same house, and a family of children have grown up healthy. Another house has been occupied for many years by a consumptive who has had the disease for twenty-five years. Neither his wife nor any of the five children have become affected, though he is in the hands of a physician who does not believe in the contagiousness of the disease, and does not direct the sputum to be disinfected. Another house was occupied for years by a consumptive mother, whose husband had died of the disease many years before in another city. The son and daughter remained in the house mentioned for eight years in perfect health. It has since been occupied by a lady whose history I know, who is also healthy. The son got married about seven years ago, and has lived in various places. Within the last two years he has become a consumptive. His strong hereditary tendency determined it. I could go on citing instance after instance. I admit they furnish negative evidence. But negative evidence in a matter of this kind is valuable. I am on the whole quite certain that in by far the larger number of cases where I have known the history of both the house and of the household for a long time, there could not even be any suspicion of house infection. It is true also that in most of the houses cleanliness and ventilation were well attended to.

Further, in the question of house infection, we must not overlook the fact that these supposed centers of infection may adjoin, and have common drainage. And, under any circumstances, does it not suggest that possibly there is something wrong in the drainage or subsoil as much as it does infection of the house? The well-known observations of Bowditch, and of others, have made us familiar with this mode by which consumption spreads in Massachusetts and in the whole of New England.

With reference to hospitals: Consumptive hospitals have been brought forward as a strong evidence of the non-contagiousness of phthisis, though I can not say that the figures they adduce are to me absolutely convincing, and there may be something in the greater prevalence and concentration of the poison that make consumptive hospitals more likely to be sources of infection. I have already referred to the observations and opinions of Dr. Williams and of Dr. Andrew. But as regards general hospitals in which consumptives are, they certainly can not be shown to be places of infection. I will quote the remarkable results in the General Hospital of Vienna. That Hospital is one of the largest in the world. It is full of consumption, and there were, as we know by some observations made long since, and before the disinfection of the sputum was attended to, in three years 2,736 deaths from phthisis, and not a medical officer or a nurse had become infected. I will refer to the record of the Pennsylvania Hospital, which always has consumptives in its wards. I have taken some pains to ascertain the truth in this matter. In my long connection with the institution there never has been a time when there were not cases of tuberculosis in the medical wards, and there have also been cases of surgical tuberculosis in the surgical wards. Of 147 resident physicians who have been in the Hospital in the last seventy years, and of whom I have traced the medical history, and many of whom I have personally known and examined, but one has died of tubercular disease. Two others have at different times shown tubercular symptoms. One of these is now living in Arizona in fair health. In the other, even bacilli have disappeared from the sputa. The one dying, did not die for over five years after leaving the Hospital. Moreover, before becoming a resident physician, he was in delicate health, so that it is not fair to attribute his death to his having been in the Hospital.

A stronger statement still can be made with reference to the nurses. Of forty male nurses that have been in the Hospital in the last twenty-five years, but one has shown any sign of tubercular disease. He is now a patient in the Hospital. He did not become tubercular until four years after leaving. There have been 163 female nurses whose histories can be fairly well traced. Of fifty-three who have left the Hospital in the last five years we know their present condition accurately. Not a single one of these certainly has had any tubercular symptoms, notwithstanding that there was always tuberculosis in the wards, always some exposure, and until recent years disinfection of the sputum was not practiced, although ventilation was always attended to. There is only one case even doubtful. She has an occasional cough, and is not strong. Her father and mother both died of consumption.

When we take all these facts into account, granting, as I do, that up to a certain extent tuberculosis is contagious, I think that the recommendation of the Council to the Board of Health is the right one. Why fix the brand of leper on a poor unfortunate because he has consumption, when the medical officer can do all that is necessary? He can instruct how to ventilate and keep the house pure, and how to disinfect the sputa. What more could a Board of Health do? What can it do, except in instances of death where proper disinfection may not be carried out? Where death has occurred, and where disinfection is not likely to be practiced, it would be proper for the Board of Health to interfere. Under other circumstances why should we place a stigma on the consumptive, why have him pursued from house to house, why have him a marked man, why have the house a marked one? Why give it a bad name and injure the landlord, because there has been a death from consumption in it? I think that the resolutions offered by the Council cover the whole case. No human being will suffer. It will only enforce on medical men the necessity to insist on proper disinfection and proper hygiene. It will do as much as possibly can be done, and as much as any Board of Health can do.

With reference to hospitals for the consumptive, there is a great deal to be said on both sides of the question. Undoubtedly larger means of separating the sick from the well are desirable. But whether this can be made in any way obligatory is doubtful; large social questions and questions of finance arise which take the matter far beyond our power materially to influence.

We must not overlook the strong hereditary tendency to the disease. If you want ever to get rid of consumption, it is not going to be simply by the disinfection of sputa and similar means. It will be largely by the prevention of the marriage of tuberculous patients. There you strike at the root of the evil. Until hygiene, preventive medicine, and

law have reached that point, I think that we must let this question take care of itself, doing the best we can to limit the ravages of the disease. I admit that it would be most desirable if we could separate the consumptive from the well. If the State were rich enough to make colonies in climates in which consumption will not flourish, that would be a most admirable means.

Let me say that it is not because I do not believe that phthisis is communicable that I oppose the contemplated action of the Board of Health to declare the disease contagious, and to register consumptives, but because I believe that the means proposed will produce hardship without corresponding value, and that they are both unnecessary and insufficient. The Board of Health has already the right, and may well enforce it, to have any house that, whatever the cause, has a bad sanitary record, put in better order. Moreover, it can do much in destroying other sources of infection, such as from diseased meat, from the milk of tuberculous cows, in improving drainage, in favoring open spaces that air and sunlight may get into the houses. But let it leave the care of the individual where it belongs—to the conscientious physician.

DR. JOHN B. ROBERTS—It seems to me that this question is almost exactly the same as the one with which surgeons struggled ten years ago. I was one of the conservative ones who did not at first practice antisepsis, but employed half-way measures and saw all my cases suppurate. This is the point to which the question of tuberculosis has come.

I think that Dr. Da Costa's statement that there are a large number of cases all over the country, which he uses as evidence that the disease is not certainly infectious, is really an argument on the other side. It is so because there is infection. There are so many hereditary cases because infection of the parents has so weakened the tissues that a lowered resistance is transmitted to the children, and they can not repel the action of the bacilli.

It is said that the doctor can do all that is necessary, but Dr. Da Costa has said that he has known of cases where the physician would not take any precautions. That is a reason that the Board of Health should step in among the poor and see that the houses are clean. We see this in diphtheria. It is not a question of damage to landlords. It would be an advantage if every one knew that every house was disinfected, either by the willing efforts of the people, or owners, or by the Board of Health. There seems to be no reason why there should not be a report to the Board of Health if it will act in a reasonable manner. There is no expectation that the Board of Health would take the same measures as in typhus or typhoid fever. It is only a few years since typhoid fever was placed on the contagious list. If the matter had been discussed publicly there would no doubt have been many men on both sides—some for, some against, putting typhoid fever on the infectious list.

It might be well to mention what has been done in other places. In February, 1892, at a conference of the medical staff of the Manchester (England) Hospital, with the medical officers of health and others, it was unanimously resolved that it was desirable that certain cases of phthisis should be notified to the medical officer.

Dr. Hermann G. Biggs, the Chief Inspector of Pathology, Bacteriology and Disinfection in the Health Department, has sent to the Health Board a long statement regarding the contagiousness of tuberculosis, accompanied by a number of recommendations. He says:

"1. Tuberculosis is a contagious disease and is distinctly preventable.

"2. It is acquired by the direct transmission of the tubercle bacilli from the sick to the well, usually by means of the dried and pulverized sputum floating as dust in the air.

"3. It can be largely prevented by simple and easily applied measures of cleanliness and disinfection."

His recommendations include:

"That there be systematically disseminated among the people by means of circulars, publications, etc., the knowledge that every tubercular person may be a source of actual danger to his associates, and his own chances of recovery diminished, if the discharges from the lungs are not immediately destroyed or rendered harmless.

"That all public institutions, such as asylums, homes, hospitals, dispensaries, etc., be required to transmit to the Board of Health the names and addresses of all persons suffering from pulmonary tuberculosis.

"That all physicians practicing their profession in the city be requested to notify this Board of all cases of pulmonary tuberculosis coming under their professional care."

The North London Hospital for Consumption issues directions to its out-patients and to its ward patients, recognizing the contagious nature of tubercular phthisis and suggesting precautions.

The Royal National Hospital for Consumption, Ventnor has this to say:

"Patients are earnestly requested not to spit on the ground, floor, or fire-place, but to expectorate into the proper vessel. When this is not possible, the handkerchief should be used without fail; but in order that the expectoration may not become dry it has been arranged that a clean pocket handkerchief shall be supplied to each patient daily, the soiled one being at the same time removed for the double purpose of disinfection and washing. *It is to be distinctly understood that spittoons shall always be used when possible, and that the handkerchief is only supplementary to prevent spitting upon the ground.*"

The Manchester Hospital for Consumption takes similar ground:

"All matter coughed up from the chest should either be spat in the fire or should be received into a vessel lined in such a way with a piece of paper that the paper and its contents may be lifted out and burnt.

"Rags that can be burnt should be used instead of pocket handkerchiefs, and if a pocket handkerchief be used it should be well boiled before the matter upon it has had time to become dry and powdery.

"N. B.—The Medical Officer of Health for Manchester undertakes to purify, *free of cost*, any house that may be notified to him by competent medical men."

Last year the Northwestern Branch of the Society of Medical Officers of Health drew up a memorandum on the subject, which has been pretty widely distributed in the North of England. In this memorandum the infectious nature of consumption is definitely laid down, and dried sputum in the form of dust is indicated as the vehicle of contagion.

The County Borough of Oldham, England, gives similar "precautions against taking consumption."

The French *Ligue Preventive contre la Phthisie Pulmonaire* says:

"The most frequent and powerful source of infection lies in the expectoration of consumptive patients. Although almost harmless so long as they remain in the liquid state, the sputa becomes especially dangerous when they are reduced to dust. They quickly take on this form when they are projected on to the ground, the floor, the walls, when they soil clothing, counterpanes, bedclothing, curtains, etc., when they are received into handkerchiefs, napkins, etc."

With this evidence of scientific work in other places, can the College of Physicians of Philadelphia deny the contagiousness of phthisis, or doubt the advisability of the Board of Health knowing and registering the houses of at least the poor and careless, in which the germs of tubercular consumption are threatening the public safety?

While there may be a few who believe in the non-contagiousness of consumption, the vast majority does believe that it is contagious to a certain extent. It is the same old story of antisepsis and sepsis. The College of Physicians should go on record that consumption is contagious more strongly than appears in the report of Council. In the second place, something should be done. That seems to me to be in the direction of letting some officer know that the consumption bacilli are to be found in a certain locality. Not the physician, but some central authority should have the authority to know and the authority to enforce such measures as will limit the spread of the disease among the poor. If we limit it among the poor, we limit it among the rich.

(To be Continued.)

WISCONSIN STATE BOARD OF HEALTH.—At the last annual meeting Dr. S. C. Johnson retired as President and was succeeded by Dr. Solon Marks. Dr. J. T. Reeve, of Appleton, resigned as Secretary and was succeeded by Dr. U. O. B. Wingate of Milwaukee. Dr. Henry Day of Eau Claire was appointed to succeed Dr. Sharney, resigned. The voluntary retirement of the veteran sanitarian, Dr. Reeve, was in the nature of a surprise to the Board. Dr. Reeve had served since its organization as Secretary with distinguished success. The new Secretary, Dr. Wingate, is a man of fine presence, great executive ability, energetic, and thoroughly informed on sanitary subjects.

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SATURDAY, FEBRUARY 17, 1894.

MEDICAL EXPERTS.

"The fruit of a surgeon's experience is not the history of his practice, and his remembering that he has cured four people of the plague, and three of the gout, unless he knows how hence to extract something whereon to form his judgment, and to make us sensible that he is become more skilful in his art; as in a concert of instruments, we do not hear a lute, a spinette or a flute alone, but one entire harmony of all together. If travel and offices have improved them, 'tis a product of their understanding to make it appear. 'Tis not enough to reckon experiences; they must weigh and sort them, digest and distil them, to extract the reasons and conclusions they carry along with them."—MONTAIGNE.

Within a recent period there have been several trials in the city of Chicago which have called for the testimony of expert medical witnesses. Some of these witnesses were expert in the true sense; others were unfit to be considered in any such capacity. One medical gentleman who occupies a position of honor in the city government by the grace of some alderman, was quite at a loss to answer the simplest question in anatomy; the "Island of Reil" was a *terra incognita* to him, and he was hopelessly tangled in trying to explain an error in a typewritten document wherein the words, "hypostatic condition," were inserted instead of "hypostatic congestion." There were other persons placed on the stand as alleged "experts" who made an equally painful exhibition of their innocence of the rudiments of an ordinary medical education.

As is but natural, such an exhibition excited both pity and disgust, and at the last meeting of the Practitioners' Club of Chicago, the question of the employment of medical experts was the topic of discussion.

DR. ARCHIBALD CHURCH, who opened the discussion, said in substance that

"the present method of giving expert testimony had been gravely criticized, and a suggestion was made that a commission of physicians called by both sides in a case before court would be more conducive to justice. He thought the present plan was a good one, but opposed the cross-examination of experts as to their capacity, because such cross-examination had degenerated into brow-beating the witness. In conclusion he said: 'If we are to progress in this matter we should first provide that experts shall be experts; we should eliminate the brow-beating, discourteous and dishonorable attitude of counsel; we should elevate the moral standard of the judge who presides on the bench, and lastly we should secure those men to act as experts who have a personal knowledge of the case under consideration.'"

DR. D. R. BROWER said the lawyers called in doctors of their own way of thinking and the trouble would never be settled until the court called in men competent to give evidence without regard as to which side it would bear upon. DR. H. M. LYMAN thought physicians should cultivate the habit of intelligible testimony and confine their language to plain English. DR. D. A. K. STEELE asserted that as long as the doctors were experts for the fee that attached to their testimony all the evidence needed by one side or the other could be secured.

DR. DEWEY had in view the Prendergast case when he said that insanity as viewed by the court was entirely different from insanity as known by the physician. The law held that a man was not insane who knew the difference between right and wrong, while a physician knew that a man was capable of appreciating the distinction and of committing a crime with malice aforethought and yet be wholly insane. He held that expert testimony should be placed entirely under the regulation of the court and given by persons of known reputation selected through the discretion of the court and not by the partisan counsel. DR. BELFIELD urged the establishment of non-partisan medical testimony. The expert should be beyond the position of a mere witness and placed on a level with the judge.

The definition of an expert is thus given in Chambers Encyclopedia:

"EXPERT. (Lat. *expertus*, from *ex peritus*, specially skilled). A man of special practical experience or education in regard to a particular subject; a word commonly applied (after the French) to medical or scientific witnesses in a court of justice, when selected on account of special qualifications, as in case of an analysis of the contents of the stomach in suspected poisoning. The term is similarly applied to a person professionally skilled in hand-writing, for detection of forgery of deeds and signatures."

Webster says:

"EXPERT.—An expert, skilful, or practiced person; one who has skill, experience, or peculiar knowledge on certain subjects of inquiry in science, art, trade, or the like; a scientific or professional witness."

Zell's Encyclopedia:

"EXPERT—(Law.) A person selected by the court, or by parties in a cause, on account of his knowledge or skill, to examine, estimate and ascertain things, and make a report of his opinion."

The discovery of truth, so far as it lies within his knowledge, for the information of the court and jury, should be the sole object of the expert witness, and the efforts of counsel to distort the truth to one side or the other, should lead the expert to be on his guard.

Much of this bias toward one or the other side, frequently arises from their being employed practically as assistant counsel, to coach the attorneys. In our judgment, a witness should be ineligible to give evidence as an expert, who has acted as adviser to counsel in the case at issue. If the judge should have the power to accept or reject a witness tendered as an expert, and would exercise it, after due examination of the qualifications of the witness, much would be gained to the cause of justice and the honor of the profession.

The German Government has solved the expert problem in a very satisfactory way. In that country the "*Gerichts Arzt*" is a medical referee appointed by the Government for a particular district. He can only receive appointment after a rigid examination by a Government Board, and when appointed and assigned to a district he is a salaried officer of the State, and his reports ("*Gudachten*,") are final on medical questions.

It is quite possible that an Act of the Legislature which would authorize the State Board of Health, or State Board of Medical Examiners, to give certificates to medical gentlemen, stating in what particular branch of medical science the recipient was qualified to give evidence as a skilled witness, would remedy the evil; at least it would be a great advance on the present system, which is not only unsatisfactory to everybody, but a blot on the jurisprudence and scientific standards of the age.

But no test of ability can insure honesty of purpose or of character; there the personal equation of the witness must stand for what his reputation in the community is worth.

The Medico-Legal Society of Chicago held a meeting Feb. 10, and adopted the following resolution:

To guarantee the interest of society and of the accused in all medico-legal investigations at least two experts shall be employed. These experts shall be appointed by the Judge.

It was unfortunate that the Society was so managed as to discuss the issues of a case still pending in the Supreme Court, as it gave a pretext for the assertion that the meeting was a pre-arranged attempt to influence the Court, and a "sharp dodge of the defense."

THE VISITS OF THE CLERGYMAN TO OUR PATIENTS.

In the sick room and at the bedside of the suffering, the clergyman and the physician meet. The one looking to the spiritual, the other to the material welfare of the patient. The spiritual healer knows, or ought to know, that it is only in a sound body the best mental achievements can be realized, while the physician understands equally well that unless the mind is at rest, the bodily healing is of doubtful certainty. In such a case can they afford to make war on each other? Each in his chosen profession will feel like exalting the line which he follows, as conducting to a successful issue; but may he be able to do this without the coöperation of the other? "No man liveth to himself; no man dieth to himself," is the declaration of Holy Writ. With this interdependence between the workers can it be otherwise than that the most satisfactory results will only be reached by mutual coöperation? Hence follows the obligation to good will and a clear understanding of the duties of each in the matter of mutual support.

This desire, however strongly felt, is complicated by that indefinable territory lying in the patient, where the material ends and the psychical and moral begins. This territory seems to be in some sort related to both, and hence the danger of physician and clergyman acting in antagonism to each other. Suppose, for example, that the physician finds his patient in such a critical situation that he regards it as necessary that the sick man should not know the danger until the crisis is past, and the clergyman, knowing the danger, feels that the man's soul must not be put in peril by leaving him to pass away without due preparation for the passage, will they not honestly endeavor to counteract each other's work? By this means intensifying the man's sufferings, and so rendering the labors of both abortive.

It will not require any great stretch of the fancy to see that in the case supposed it would be far better for both to work together to the same end. The clergyman might make things lively by telling some of his best stories, and join with the physician in drawing the sick man's mind away from himself, and both together could demonstrate that "two are better than one." In such an emergency the sick room should, if possible, be made the pleasantest room in the house. We remember medical men who had cultivated cheerfulness to such a degree, that their very presence was an invitation to come into the light, and clergymen, too, who had the good man so strongly presented in their faces that the children hailed their coming with delight. Let two such spirits meet in the sick room and they would almost carry everything before them. The grace of cheerfulness has never been cultivated for half its worth in this work-a-day world of ours.

We offer these thoughts to our brethren in the hope that while the "times are hard," everything that may reasonably be done to alleviate suffering, will be duly considered, and that sympathy will be cheerfully given whenever there is a possibility of making men happier and better. As specialists men work into grooves from which it seems almost impossible to draw them. They isolate themselves and so circumscribe their own usefulness.

We do not propose to trespass upon the peculiar domain of the clergy, but we do desire that when our labors lie in the same fields, that a friendly sympathy shall render our mutual labors more efficient. Physicians have not done the best work of which they are capable, and never shall, until the inspiring power in the support of kindred spirits shall be more fully realized than at the present time. The trend of mankind is toward fellowship in these days as never before. Let our profession not be laggards in the race.

WEATHER AND DISEASE.

A country physician with large practice, was deploring his inability, from constant work, to make original researches, or to read books, and expressed the opinion that no one with a large country ride could contribute much to the science of medicine. This is a common error which a little reflection will quickly disprove. As an illustration take the common theme of all conversation, the weather. The physician with long rides in the country, and time for observation and reflection, can be an expert and contribute facts in this field as important to science as those found in the laboratory and by the microscope. By the weather we mean the moisture, temperature, pressure, winds, clouds, ozone, electricity, sudden changes of heat and cold, storms and sunlight. From the earliest times these forces have been recognized as all-powerful in the production of disease. In our climate prolonged hot or cold periods very clearly affect the death rate, but how and to what extent is unknown. Certain diseases are retarded or accelerated by those forces. The unknown and psychic effect of the weather on all, both sick and well, are within the observation of every one, and yet very little study has been made in this direction. The prayer book recognizes this fact, in petitions for favorable weather, and protection from lightning and sudden storms. Even the POPE has prepared a manual to be used by the clergy in bad or unfavorable weather.

DR. FARR of England, and other authorities, have said that the thermometer would register very largely the disease mortality and even criminality of a community. The weather proverbs of the almanacs and the observations of persons who live in the country, are practical store houses of obscure half facts, that await study in the future. Thus everywhere these variable forces we call weather, affect and influence the physical and psychical conditions of both men and animals. The physician in the country is in the most favorable condition to study these facts. The surroundings are always more sensitive to these changes than in the city, where artificial states largely control disease. The country and country village are the real laboratories where these unknown forces can be watched and determined.

A vast literature of facts invested in superstition and delusions, cover this region, and the country physician should of all others be a teacher here.

A barometer and thermometer costing only a small sum, to measure the pressure and temperature of the air, hung up on the office stoop, and a blank book in which any member of his family can record the readings of these instruments three or four times a day, with the directions of the winds from the weather vane, this with his daily record of cases, will be the starting point.

He will soon begin to trace some connection in his cases of fevers, and the obscure nerve troubles and exhaustions, to these sources, and a new field will open for original work, the fascination of which will relieve the drudgery, and make the long rides moments for pleasing reflection. From this point the facts of the weather influence on disease will accumulate and widen, suggesting other methods of observation and other means of measurement by instruments to give accuracy to the facts. The physician in the mountain region will accumulate facts that are peculiar to the special cosmic conditions of that section, and the physician in the river valley will have a new range of facts for his section.

The observers on the sea shore or lake border, or on the open prairie or wooded country, will each have a different story; each have different facts, which will be parts of great laws of the highest practical value. In a large manufactory where three thousand men are employed, the daily product varies with the weather from 5 to 12 per cent. less. Days that are bright and clear bring out the best work in the largest quantity, and days that are stormy and cloudy are followed by poor work, from 5 to 12 per cent less. The local physician was appealed to, to explain this fact. Had he made a study of these common influences, which are the subject of every day's greeting, he should have been able to throw some light on this problem.

A noted surgeon thinks his cases recover more quickly when operated on in clear bright days; a physician of some prominence gives his drugs on dark days, and believes narcotics act more profoundly at these times. These facts and opinions are almost innumerable and can be found in every community. Who will enter this field to explain these phenomena? The physician who has full opportunity for observation, and time to reflect, must do this work. The village and country doctor is better situated for this than any others.

This is only one field of study that can be carried out in long lonely rides and practice in the country. The absence of professional contact, and the physical weariness of exposure to all sorts of weather, has its full compensation in opportunity to become students of nature, and master the facts that are spread out everywhere. The country physician can not only become eminent in medicine, but in other fields of science. All that is essential is powers of observation, and disposition to study the facts that, like an open book, are all about him.

LIABILITY FOR DISMISSAL OF PATIENT.

The liability of a physician in dismissing a patient is passed upon by the Supreme Court of Iowa in the case of Mucci v. Houghton, decided Jan. 17, 1894. This was an action brought to recover damages for

alleged malpractice. The former had sustained a fracture of his left arm between the wrist and elbow. Both of the bones of the arm were broken. He employed the doctor sued to reduce the fracture and treat the injury. The latter at first bound up the arm in splints, and afterward incased it in a plaster cast. After giving attention to the injury for a little less than two months by examining the condition of the fracture the cast was removed, and the surgical attention ceased. The ground of the complaint was that the doctor treated the injury so unskilfully that when the treatment ceased the injury was not cured, but a false joint was created between the elbow and wrist at the place of fracture. There was a trial by jury, and a verdict and judgment for the party suing, which is affirmed by the Supreme Court on appeal.

One paragraph of the trial court's charge to the jury was as follows: "If a physician or surgeon be sent for to attend a patient, the effect of his responding to the call, in the absence of a special agreement, will be an engagement to attend the case as long as it needs attention, unless he gives notice of his intention to discontinue his services, or is dismissed by the patient; and he is bound to exercise reasonable and ordinary care and skill in determining when he should discontinue his treatment and services. If you find from the evidence that the condition of the plaintiff's arm is due to his having been dismissed when he ought not to have been dismissed, the defendant would be liable, unless the evidence further satisfies you that the defendant, in dismissing him, if he did dismiss him, used ordinary and reasonable care and skill in determining when to dismiss him; and, if he dismissed him under a mistaken judgment, he would be liable, and you should hold him liable unless you find from the evidence that, in making up his mind when to dismiss him, he exercised reasonable and ordinary care and skill and had regard for, and took into account, the well-settled rules and principles of medical and surgical science."

It was argued that the last part of this instruction required a greater degree of diligence and skill than the law imposed upon a physician and surgeon in the practice of his profession. He was required by the instruction, in determining whether his patient had so far recovered as to require no further medical or surgical attention, to exercise reasonable and ordinary care and skill, and to have regard to and take into account the "well-settled rules and principles of medical and surgical science." This the court holds was not erroneous, especially as the jury were told in another part of the charge that the law required a surgeon to have and exercise the average or ordinary skill possessed by members of his profession in his locality.

It may also be noted that in this case it is further held that it was not improper to permit the plaintiff, as a witness, to state in general terms that he complied with the instructions given by the doctor, as it would not be practicable for him to state what he was told to do, and then relate the particulars of what he did.

CORRESPONDENCE.

Ligation of Uterine and Ovarian Arteries.

To the Editor:—In your issue of Feb. 10, 1894, a report of a case is made by J. B. Greene, M.D. of Mishawaka, Ind. The report consists of a description of *ligating the uterine arteries and both ovarian arteries.* The writer said: "Accordingly I made the ligation of the uterine arteries and a part of the broad ligament, after the method described by Martin, but found it impossible to reach the ovarian arteries per vaginam. I then cut through the abdomen and with considerable difficulty was enabled to pass a ligature around both ovarian arteries, passing my needle under the Fallopian tubes and then back and around the vessel, tying close to the uterus. The uterus showed such a great engorgement of blood that I felt certain there would be no danger of gangrene of the uterus, as there was sufficient collateral circulation from branches of the ovarian arteries to maintain life in the organ."

As this report appears in one of the best journals of this country I deem it proper and just to criticise it.

Just think of ligating both ovarian and uterine arteries in a living woman. They are the only source of life to the uterus. I state this from some sixty careful dissections of the human uterus by my own hand. For in no single case could the uterus be kept alive by by the tiny little branch which springs from the deep epigastric that runs toward the uterus on the round ligament. Besides, the writer says, the tumor would likely weigh ten pounds, and yet he cut off the nourishing arteries of ten pounds of tissue. But no gangrene followed, for months afterward the same operator examined and found that she was menstruating regular. The writer said he tied both ovarian arteries and both uterine arteries and then "felt" there was sufficient collateral circulation to maintain life in the uterus. Where is such collateral circulation found? It can not be in the artery of the round ligament, and anatomy so far has not demonstrated any other.

The fact is, that such reports are dangerous, and they show how new operations may be abused by those unacquainted with natural facts. Any one familiar with anatomic facts of uterine circulation would expect nothing but gangrene if he ligated both ovarian and uterine arteries, especially when the uterus is large. If the ovarian and uterine arteries are ligated the uterus can be cut out of its place with anatomic certainty without fear of hemorrhage being fatal. There is no doubt that the operator in this case did not secure either ovarian artery, as in cases of tumor it frequently is situated a considerable distance below the tube. The reporter, in this case, combined Dr. Martin's operation of vaginal ligation of the uterine arteries with the operation that I presented some time ago, which is, to ligate the ovarian arteries and the uterine as it courses along the side of the uterus. But these two operations must not be done at the same time on the same patient. Such a procedure will bring gynecology into disrepute. Large active viscera will nearly always gangrene by suddenly cutting off the arterial supply. The change is so sudden that they have not time to atrophy. Sloughing of uterine tumors is not a rare matter,

even without the interference of surgery. No doubt the intended view in this operation missed its mark and saved the life of the woman. But in any case it was such a radical, ill-advised and hasty application of the operation that, no doubt, had the surgeon time to reflect he would not even attempt it with an understanding of anatomic facts.

I do not think that any expert could go into court and support any physician who would ligate both ovarian and uterine arteries and not extirpate the uterus. Even if no disaster followed (which is anatomically and physiologically contrary to known laws), I would consider it an unjust experiment to ligate both uterine and ovarian arteries. Again, the physician who will ligate both uterine arteries and one ovarian artery at one operation is, so far as we know at present, putting the life of a patient in jeopardy.

I wish the reporter of this case to understand that I have no ill feeling to present, as I am not acquainted with him personally. The report appears in public print, and it is the right of liberty to criticise in public print. It may be the means of restricting the attempt of the ligation of both uterine and ovarian arteries on the same patient at the same time.

F. Byron Robinson, M.D.

Chicago, Feb. 13, 1894.

"Superfluous Spectacles."

Chicago, Feb. 9, 1894.

To the Editor:—The editorial in the Journal of February 3, under the above title, is on the whole excellent. I had read Dr. Pooley's article which was the text for the editorial carefully and with much pleasure, and in the main concur in his conclusions. There are some points in the editorial, however, which are not deducible from Dr. Pooley's article, and others which are entirely apart from it, which, it seems to me, are open to criticism. First, you seem to argue, though that is not very clear, that if a patient when out of health has glasses prescribed which he wears with relief and comfort until the general health improves and then voluntarily relinquishes them, that the glasses were of no service. As well might you argue that the tonic or restorative medicine taken when out of health was of no benefit because not needed when the health is restored. I believe it is a very common practice with oculists (it certainly is with me) to prescribe lenses with the distinct expectation that they can be taken off when the general health and the eye health improves. The rest given to the eyes by the glasses assists the eyes to so recuperate that they may be used comfortably without glasses; and the relief given thereby to the nervous and muscular systems, is, I am sure, a potent factor in the goneral restoration of health. It is not at all uncommon to find young persons suffering from almost constant headache from eye-strain, and in whom the headache is relieved at once and entirely by proper lenses, after a time gradually leaving off of those lenses, without a return of the headache. Does that prove that the glasses were of no use? Does it not rather prove that the eyes have been so strengthened and improved by the glasses that they are now able to do their proper work without the fatigue and pain formerly experienced? In such cases, where there is a moderate degree of ametropia only, I invariably instruct my patients that the glasses are a means, not an end, and that it is to be hoped that they may later be able to discard them wholly or in part. You ask: "Does every optic defect need correction?" Certainly not, nor do I think that any prominent ophthalmologist so teaches. It seems to me that the indications for lenses are and should be very distinctly kept in view. They are but two, the relief of discomfort in the use of the eyes and the improvement of vision. If there is no discomfort from the use of the eyes but vision is improved by lenses the patient may, I think, elect whether he will wear glasses or not. If the bother of wearing glasses is greater than the pleasure of improved sight he may with propriety refuse them. (Except in progressive myopia which is foreign to this topic.) If on the other hand there is discomfort from the use of the eyes which can be relieved more easily by the use of lenses than by any other means, I care not whether the required lens be of high or low power, such lenses should be prescribed and worn so long as, and no longer than they are beneficial. And this leads to the consideration of what it seems to me is a most important misconception in your editorial when you comment on the use of low degree spherical and cylindrical lenses. You argue that the eye can not appreciate a less degree than 0.75 D. sphere and a less degree than an 0.50 D. cylinder. If this were so it would very much simplify our trial cases of test lenses. There is no logic in saying that the eye can not appreciate less than 0.75 D. S. below 0.75 D. and yet can appreciate a shorter interval above that; or that the eye can not appreciate less 0.50 D. C. below 0.50 D. and can appreciate less than that above. So that, if your statement is correct our trial cases instead of having, as usually now, twelve pairs each of spherical and cylindrical lenses up to 3.00 D. need have but four pairs of spheres viz: 0.75 D., 1.50 D., 2.25 D., and 3.00 D., and eight pairs of cylinders viz; 0.50 D., 1.00 D., 1.50 D., 2.00 D., 2.50 D., and 3.00 D. The fact is, however, that the ordinary eye can appreciate a difference of one-fourth of a diopter in either a sphere or cylinder between one and three diopters and one-eighth of a diopter below one diopter. But the ability of the eye to appreciate such small differences is no proof that such differences are of practical importance; that must be determined by clinical experience. In regard to that you say: "The majority of oculists have learned from their own experience, as well as from the failures of the champions of the 0.25 D. cylinder, that such weak glasses are merely of mythical value." I think you are mistaken in that statement. So far as I have been able to learn and observe, the oculists who believe that such weak glasses are of merely mythical value have not used them. They do not believe that such lenses can have any value and so have never tried them. While those who now use them have many of them, like myself, started in skepticism to try weaker glasses than were formerly used and finding them helpful have tried again and again until now, speaking for myself, I should rather lose any other one lens from my trial case than the 0.25 D. cylinder. Again you say, "It is true that a cylinder of 0.25 D. is not only employed but even highly recommended by a few prominent oculists, but they have as yet furnished no proof that such lenses benefit their patients." Now that statement surprises me very much, for I thought a great deal of proof of such benefit had been furnished. I will therefore make this proposition, for if such proof has not been presented it should, if available, be before the profession. If you will indicate what proof you consider conclusive, I will endeavor to furnish the proof to establish the fact, if it is a fact, as well as any fact in medicine is established, that an 0.25 D. cylinder is a most valuable therapeutic agent.

Horace M. Starkey, M.D.

An Undignified Letter.

To the Editor:—The complaint of Dr. Cohen, published in the Journal several weeks ago, was no doubt prompted by a keen sense of professional propriety; but did he not forget his high aim in the unprofessional and undignified tone of the latter part of his communication? As a matter of fact, a portion of it should not have been printed.

Constancy.

BOOK NOTICES.

The National Dispensatory. Containing the Natural History, Chemistry, Pharmacy, Actions and Uses of Medicines, including those recognized in the Pharmacopœias of the United States, Great Britain and Germany, with numerous references to the French Codex. By ALFRED STILLE, M.D., LL.D., Professor Emeritus of the Theory and Practice of Medicine and of Clinical Medicine in the University of Pennsylvania; JOHN M. MAISCH, Ph.M., Phar.D., late Professor of Materia Medica and Botany in Philadelphia College of Pharmacy, Secretary to the American Pharmaceutical Association; CHARLES CASPARI, JR., Ph.G., Professor of Pharmacy in the Maryland College of Pharmacy, Baltimore, and HENRY C. C. MAISCH, Ph.G., Ph.D. New (fifth) edition thoroughly revised, according to the new United States Pharmacopœia (7th Decennial Revision, 1894). In one magnificent imperial octavo volume 1,910 pages, with 320 elaborate engravings. Cloth, $7.25; leather, $8.00. With Ready Reference Thumb-letter Index, cloth, $7.75; leather, $8.50.

The sweeping changes made by the last United States Pharmacopœia necessitated corresponding changes in the well-known dispensatories, which are really "companions" to the Pharmacopœia. No physician can well afford to do without the work, and to the pharmacist it is indispensable. The work under consideration has been thoroughly revised, many of the older articles have been rewritten, and a large number of new ones introduced descriptive of all the latest synthetic remedies and unofficial preparations now in use. Prof. Stillé says:

> In preparing a work under the conditions imposed on the present one, it is impossible, even with scrupulous vigilance, to prevent a certain commingling of fact and speculation, for the most cautious reporter can not always avoid mistaking the one for the other. The present writer claims only to have striven assiduously to maintain a separation between facts and theories, believing that whatever fate may await the latter, the former are in their nature indestructible; '*Opinionem commenta delet dies; naturae judicia confirmat.*' The deplorable results of following physiologic experiment and chemic composition, instead of clinical experience, as the chief teacher and guide in therapeutics, have led to the rejection by practical physicians of many medicines which not long before were introduced with loud acclaim.

The work is well indexed and the publishers state that the therapeutic and general indexes contain 25,000 references. The revision is not perfunctory, but a conscientious one, and the fifth edition is a worthy successor of the editions that have preceded it. The dosage has been given throughout in the decimal system, and the metric weights and measures are used throughout, which will be of great service to those wishing to write their prescriptions in the (now almost universal) metric system.

The Johns Hopkins Hospital Reports. Vol. iii, Nos. 7, 8, 9. Report in Gynecology. Paper. Pp. 762. Baltimore: The Johns Hopkins Press. 1894.

This handsomely printed and well-illustrated volume contains ten articles by Howard A. Kelly, M.D., and articles by Mary Sherwood, M.D., Albert L. Stavely, M.D., Hunter Robb, M.D., W. W. Russell, M.D. and A. S. Murray. In addition to the foregoing there is a record of the deaths occurring in the Gynecologic Department of the Hospital from June, 1890, to May, 1892.

The volume appropriately opens with a picture and description of the gynecologic operating room.

The topics are: 1, "An External Direct Method of Measuring the Conjugate Vera;" 2, "Prolapsus Uteri without Vesical Diverticulum, and with Anterior Enterocele;" 3, "Lipoma of the Labium Majus;" 4, "Deviations of the Rectum and Sigmoid Flexure associated with Constipation a Source of Error in Gynecological Diagnosis;" 5, "Operations for the Suspension of the Retroflexed Uterus;" 6, "Potassium Permanganate and Oxalic Acid as Germicides against the Pyogenic Cocci;" 7, "Intestinal Worms as a Complication in Abdominal Surgery;" 8, "Gynecologic Operations not involving Cœliotomy;" 9, "The Employment of an Artificial Retroposition of the Uterus in covering extensive denuded areas about the Pelvic Floor;" 10, "Some Sources of Hemorrhage in Abdominal Pelvic Operations;" 11, "Photography applied to Surgery;" 12, "Traumatic Atresia of Vagina, with Hematokolpos and Hematometra;" 13, "Urinalysis in Gynecology;" 14, "The Importance of Employing Anesthesia in the Diagnosis of Intra-pelvic Gynecologic Conditions;" 15, "Resuscitation in Chloroform Asphyxia;" 16, "One Hundred Cases of Ovariotomy performed on Women over Seventy Years of Age;" 17 and 18, Statistical Tables. The work is valuable, and is creditable in every particular to the great University.

Operative Surgery. By TH. KOCHER, M.D., Professor at the University and Director of the Surgical Clinic at the Berne University. With 163 Illustrations. New York: Wm. Wood and Company. 1894.

Prof. Senn, in his "Four Months Among the Surgeons of Europe," says on page 148:

"From my acquaintance through literature I had always considered Kocher of Berne, one of the ablest of living surgeons, and in this opinion I was only confirmed by a personal acquaintance."

Thus introduced to English-speaking Americans, a book in English by Professor Kocher will be received with great attention and deference. The book is divided into four parts, the first of which is devoted to the introduction, general remarks on anesthesia, the treatment of wounds and the selection of the direction of the incision. Part II includes special operations; incisions; the relations of the cerebral convolutions to the skull; trephining, and operations on the face; the upper lateral cervical triangle; the anterior cervical triangle; the lower lateral cervical triangle; the nuchal region; the thorax; the spinal column; the lumbar region; the abdomen; the perineum; the sacral region; the upper extremity; the lower extremity; the thigh; the leg; and the foot. Part III gives the resections, and Part IV the amputations and exarticulations.

The book is remarkable for its extreme simplicity of style, its entire freedom from superfluities of any sort, and its directness. These are, indeed, always characteristics of a master, whether the topic be war, religion, law or medicine. These characteristics were possessed by Cæsar and General Grant, St. Paul and Bishop Bossuet, Cicero and Blackstone, Hippocrates and Celsus. The nearer the approach to the simple models, the more enduring the work.

Kocher's book is of that character that in times to come it is quite likely to be taken for the exponent of the method of operating of our epoch. The book itself does not record the beginning of a procedure, or trace the planting of the seed; it simply reproduces the full-blown flower, as this century's surgeons have developed it.

Treatment of the Diseases of the Stomach and Intestines. By DR. ALBERT MATHIEU, Physician to the Paris Hospitals. Cloth, pp. 294. New York: Wm. Wood & Co. 1894.

This book purports to contain a general summary of the therapeutics of diseases of the stomach and intestines. At the outset there is an excellent chapter on diagnostic technique, and as the French have always excelled in diagnosis we find the book here very strong.

The diagnostic study of the author falls under the following heads: 1, External Examination; 2, Internal Examination, together with a chemical study of the Gastric Juice; 3, Study of the Excreta.

In the external examination of the stomach the author regards the elastic siphon as essential. The giving of a test meal, forced feeding, and washing out the stomach, are all of importance, according to our author. He prefers the Frémont tube to any other, and it is the one he habitually uses:

> Frémont's tube is smooth like that of Debove, and a little less rigid.

It is, however, stiff enough to enable it to pass readily the isthmus of the pharynx, even in patients who have never submitted to the operation before. It is longer than other tubes, and this increases the aspiratory power of the siphon. A small glass tube is inserted in its course, which enables us to see whether the fluids to be passed into or withdrawn from the stomach flow readily. This is especially useful when gavage is practiced. Finally, the gastric extremity of Frémont's tube is provided with a wide opening, so that it is less easily pinched by the walls of the stomach than are the other tubes; and it is more apt to remain patulous during the giving of a test meal.

The author, however, does not use the other parts of the Frémont apparatus, and seldom uses the aspirator for extraction, preferring Ewald's method of expression, which is thus practiced:

"The sound being introduced, whether during fasting or after a test meal, the patient is told to cough. He ought to cough especially with the diaphragm, in such a way as to cause a series of blows against the stomach. This suffices in most cases to fill the tube, and the gastric fluids then flow out on the principle of siphonage."

As it is not yet considered desirable to make a fistulous opening into the stomach, *a la* Alexis St. Martin, every time it is desired to examine the fluids of the stomach, a test meal is given the patient and "removed at end of an hour counting from the time the first mouthful is taken."

Space will not permit us to give further extracts from this highly interesting and truly scientific volume, which should be read by every medical practitioner desiring to keep pace with the advances of the profession.

The book is marred by an excess of zeal on the part of the translator, who has translated most of the formulæ into ounces, scruples, drachms and grains, instead of allowing them to remain in the simple and easily understood metric system now employed throughout the civilized world, except by the British.

Politzer's Text-Book of the Diseases of the Ear and Adjacent Organs. For Students and Practitioners. Translated by Oscar Dodd, M.D., Assistant Surgeon at the Illinois Charitable Eye and Ear Infirmary; Clinical Instructor of the Eye and Ear in the College of Physicians and Surgeons, Chicago. Edited by Sir William Dalby, F.R.C.S., M.B. Cantab., Consulting Aural Surgeon to St. George's Hospital. With 330 original illustrations. London: Baillière, Tindall and Cox. 1894. Third edition, pp. 740.

This is a great work. It marks an epoch in the progress of otology and portrays with conservatism the present status of the specialty. The coming of this book has been looked for with more than ordinary interest by American aurists, who largely draw their inspiration from the accomplished author. Indeed, so marked is the confidence and esteem with which he is regarded by the many on this side of the Atlantic who have been taught in his Vienna clinics, that we might aptly confer on him the title of Politzer, our patron saint.

The publishers have produced a handsome volume, with abundant, well executed illustrations. Dr. Dodd deserves our thanks for the very creditable manner in which he has performed, for our benefit, the arduous duties of the translator. The purity and perspicuity of his English will be appreciated. Another point to gladden the heart of the evening reader—the paper is not glazed.

There are two subjects concerning which otologists will be particularly anxious to know Prof. Politzer's present views. The operations for the removal of the ossicles, and on the mastoid process. Detailed descriptions of the various methods for opening the mastoid are given, especially those of Stacke, Schwartze and Bergmann.

An advanced position is taken on the question of operative procedures. The necessity of operations in many cases can be easily seen from this observation on page 489: "With every acute middle ear suppuration, pus is found in the cells of the mastoid process, as I have proved by numerous dissections." Probably no other aurist has made as many valuable dissections. His collection of specimens exhibited in Berlin, at the last Congress in Chicago last summer and at the Pan-American Medical Congress were the delight of lovers of aural anatomy and pathology.

In advising practice for operating he remarks: "To become sufficiently skilful the operation should be done at least forty times on the cadaver."

The author speaks much more favorably of excision of the membrana tympani and ossicula for dry catarrh than did those who participated in the discussion of this subject at the large meeting of otologists in Berlin in 1890. It was treated with much disfavor at that time. Yet he does not really commit himself in favor of it. He believes that "the operative treatment for disturbances of hearing caused by the adhesive processes after suppuration of the middle ear is exhausted has a greater future than the operative treatment of the non-suppurative adhesive processes." Concerning the recently reported sixteen cases by Jack, in which favorable results followed extraction of the stapes, he says: "The reports of Jack should taken with great caution."

Examiners for life insurance will be interested in the rules proposed here for admission and rejection of applicants with ear affections. The rules are not only safe but stringent. Here, as everywhere, the author's commendable conservatism is apparent.

It is frequently remarked that European otologists pay far less attention to naso-pharyngeal diseases as etiologic factors in ear diseases than American specialists, but here are eighty-four pages devoted to the subject. It is somewhat surprising, however, to find the inhalations of the strongly irritating vapors of acetic acid, ammonia, etc., recommended for acute catarrh, and to see the Weber nasal douche, a pernicious instrument, mentioned except for condemnation. But excellent precautions for its use, and warnings are given, for those who will use it.

Pilocarpine injections into the tympanic cavity, that have been very favorably reported on by the author, have been tried and abandoned by a number of Americans as affording negative results.

Concerning Lucae's sound he speaks rather discouragingly, but recommends Delstanche's masseur for the mechanical treatment of adhesive processes.

The cut on page 114, illustrating Politzer's method is wrong, for it represents the current of air as being propelled in the direction of the frontal sinus, or nasal duct, instead of the orifice of the Eustachian tube, where it is intended to go. This is an important point. The cuts on pages 94 and101 give the correct position. There are some typographical and other errors that ought not to have escaped the attention of the proof reader, but they are comparable to blemishes on a great man's face; they do not dwarf his greatness.

Trephining in the Ancient and Modern Aspect. By John Fletcher Horne, M.D., D. Sc. (Hon.), F.R.S.Ed. Honorary Surgeon to the Barnsley Beckett Hospital, and late Assistant Resident Surgeon to Leeds General Infirmary. Cloth, 16mo., pp. 133. London: John Bale & Sons. 1894.

Dr. Horne has produced a very entertaining book, and one which seeks to give proper credit where it is due, from the beginning down to the present time. He points out that all the changes from former methods "may not be improvements in the best sense of the word; time and experience will surely separate that which is valuable from that which is useless. A careful weighing of the evidence at present obtainable may be advantageous. It is one of the functions of the literary worker to rescue valuable matter from oblivion and to render it more accessible." . . . "No apology is needed for the frequent references I have made to American surgery; I can not but admire the genius and assiduity of the surgeons of that country, nor can we grudge

them a large share of the honor for the great advances made in the department of brain surgery."

The book is essentially a historical review of ancient and modern practices, and with the exception of a few case reports of interest, there is little original matter. In summing up the literature the author compliments the editor of this JOURNAL by quoting from his "Address on Surgery," delivered at the annual meeting at Detroit,[1] as follows:

"Dr. J. B. Hamilton has well expressed our conclusions: But however interesting from an historical point of view to revive these lessons of the past, we must remember that, as science is progressive, so the practice keeps equal step with that progress. In the past, practice was in advance of scientific knowledge. Tradition governed, instead of history and inductive reasoning. In the modern practice of the surgery of the brain and its envelopes we have, indeed, little to offer that is new in the practice—the slightest glance at medical history forbids that conclusion, but the reasons for our methods belong to us alone; and our century, although the heir of the accumulated wisdom of ages that are past, will have more to give to posterity in solid knowledge than any half dozen centuries that have preceded it, and particularly in the matter of diagnosis."

Dr. Horne did not give the date or place of publication of the foregoing remarks, but he paid an even more delicate compliment to the editor of this JOURNAL, for we find that he adopted the abstract quotations as given in the address of Prof. Hamilton, as his own, even to the Shakesperian quotation with which the address closed. As the quotations themselves are good enough to bear repetition, we reproduce some of them as follows:

PROF. HAMILTON'S ADDRESS, JUNE, 1892.

Salvianus mentions a lunatic who by accident had the skull broken and was "excellently cured," and another who "breaking his head with a fall from on high, was instantly recovered from his dotage." (Burton). Gordonius recommended "the head to be shaved and bored to let out fumes, which without doubt will do much good. I saw a melancholy man wounded in the head with a sword, his brain pan broken; so long as the wound was open he was well, but when his wound was healed his dotage returned again." Guianerius cured a nobleman in Savoy by boring alone, "leaving the hole open a month together, by means of which, after two years melancholy and madness, he was delivered." (Burton).

* * * *

Celsus followed the Hippocratic method, which for four hundred and sixty years had been practiced almost without change; and we are thus able to see that the ancients anticipated us in these operations on the bony walls of the brain.

Dr. Andrew Smart reports that Prof. Chiene trephined for basal hemorrhage in a woman lying at the point of death, and saved his patient. There was an antecedent injury, and Prof. Chiene at first trephined at the right parietal eminence, but finding the result negative, again applied the trephine lower down, and forward. The exact position is unfortunately not stated. There was free hemorrhage from the membranes, but the breathing became normal, and after incising the dura there was evident relief to the cerebral pressure and tension.—(*Brain*, London and New York, 1891, pages 287, 288).

Dr. Laplace of Philadelphia, by a brilliant operation, removed clots from the base of the brain, and the patient recovered. The patient was a boy of ten years who while at play had fallen on a broken fencing foil. The steel had penetrated the left orbit between the inferior orbital ridge and the eyeball. The child became unconscious, with deepening coma, right hemiplegia, left facial paralysis, complete aphonia, respirations 30, pulse 140, temperature 104.5 degrees. The wound was explored without result, and thirteen days later trephining was performed low in the temporal fossa. Laplace devised an instrument for the removal of the clots. I quote from his report:

"To reach the center of the base of the brain for the removal of the suspected clot, a miniature egg beater, consisting of four loops of platinum wire, had been improvised. This was perfectly malleable, and could be insinuated between the dura mater and the skull without wounding the cerebral structure. Having reached the cavernous groove, the instrument could be pushed no farther. It was then turned on its axis for the purpose of catching coagula in its loops. This was effectually accomplished, and about a teaspoonful of clotted blood removed piecemeal. While dragging more out, considerable venous hemorrhage took place. The trephined opening was then immediately plugged with iodoform gauze, and the usual dressings were applied. The wound was entirely healed in three months, and in six months afterward the patient had equal use of both extremities."

Dr. Laplace emphasizes "the safety of trephining near the base of the skull, the ease of arresting violent hemorrhage from the sinuses of the dura mater, and the importance of drainage in all cases of cerebral injury." (*Medical News*, Philadelphia, Dec. 5, 1891).

DR. HORNE'S BOOK, 1894.

Salvianus mentions a lunatic who by accident had the skull broken and was "exceedingly cured," and another who "breaking his head with a fall from on high was instantly recovered from his dotage." (Burton). Gordonius recommended "the head to be shaved and bored to let out fumes, which without doubt will do much good. I saw a melancholy man wounded in the head with a sword, his brain pan broken; so long as the wound was open he was well, but when his wound was healed his dotage returned again." Guianerius cured a nobleman in Savoy by boring alone, "leaving the hole open a month together, by means of which, after two years melancholy and madness, he was delivered." (Burton).—Horne, page 26.

* * * *

Celsus, A. D. 30, followed the Hippocratic method, which for four hundred and sixty years had been practiced almost without change.—Horne, page 26.

Another case recorded of trephining for basal hemorrhage and a most interesting case it is, by Prof. Chiene on a patient of Dr. Andrew Smart. The Professor gave us a résumé of the case at the Bournemouth meeting. I operated on a person comatose, etc., etc.

In this case there was an antecedent injury, and Prof. Chiene at first trephined at the right parietal eminence, but finding the result negative, again applied the trephine lower down, and forward. The exact position is unfortunately not stated. There was free hemorrhage from the membranes, but the breathing became normal, and after incising the dura there was evident relief to the cerebral pressure and tension.—Horne, page 74.

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Dr. Laplace emphasizes the safety of trephining near the base of the skull, the ease of arresting violent hemorrhage from the sinuses of the dura mater, and the importance of drainage in all cases of cerebral injury.—Horne, page 74.

In regard to the treatment of epilepsy, Dr. Sachs in the *New York Medical Journal* for Feb. 20, 1892, says: "What can we expect from the surgical treatment of epilepsy?"

Simple trepanation seems to be more successful in these epilepsies associated with infantile palsies than in the traumatic forms, probably because of the still greater frequency of cysts in these cases than in the traumatic forms. Forty-four per cent. of all cases of infantile paralysis develop epilepsy. Of all cases of epilepsy a very fair proportion were developed in connection with infantile palsies. As soon as epileptic symptoms appear, the paralysis has the value of a focal symptom. In children excision of a center is a less serious affair than in the adult, for in the former, other parts of the cortex are capable to a greater degree of assuming the functions of the destroyed part. Under favorable conditions the surgeon may be able to cure a few cases of epilepsy. He will be able to improve many.

It will be seen that while there has been a distinct gain in many branches of cerebral surgery there is yet very much to be perfected, but all this wonderful advance is directly due to the great discovery of Pasteur, and the practical genius of Lister. Antiseptic methods have alone made advance on the old lines possible. The Rip Van Winkle of the profession may well rub his eyes and quote the lines of "Macbeth":

"The times have been; that
When the brains were out,
The man would die and
There an end; but now they
rise again."

Dr. Sachs, in answer to the implied question, "What can we expect from the surgical treatment of epilepsy?" says:

"Simple trepanation seems to be more successful in these epilepsies associated with infantile palsies than in the traumatic forms, probably because of the still greater frequency of cysts in these cases than in the traumatic forms. Forty-four per cent. of all cases of infantile paralysis develop epilepsy. Of all cases of epilepsy a very fair proportion were developed in connection with infantile palsies. As soon as epileptic symptoms appear, the paralysis has the value of a focal symptom. In children excision of a center is a less serious affair than in the adult, for in the former, other parts of the cortex are capable to a greater degree of assuming the functions of the destroyed part. Under favorable conditions the surgeon may be able to cure a few cases of epilepsy. He will be able to improve many."—Horne, page 87.

These have been removed by the introduction of antiseptic surgery and the investigation of the relations of internal and external parts. Surgery now interposes where it formerly held aloof, and looking back on the marvelous results of recent years, the limit of its power seems to be still far off. And may we not now say in the words of the immortal bard in "Macbeth":

"The times have been; that
When the brains were out,
The man would die and
There an end; but now they
rise again."

—Horne, page 131.

Sydney Smith, in his review of Seybert's Annals of the United States, in 1820, said: "In the four quarters of the globe, who reads an American book?" We are of opinion that our esteemed friend, Dr. Horne, might answer this question with some emphasis.

NECROLOGY.

E. F. Latta, M.D., of Unadilla, Neb., January 29.

C. D. Smith, M.D., of Raleigh, N. C., February 5.

J. T. Doyle, M.D., of Wilkesbarre, Pa., February 9, aged 57.

Walter Noyes, M.D., of Butte City, Mont., died of pneumonia February 29.

[1] JOURNAL AMERICAN MEDICAL ASSOCIATION, June 11, 1892.

J. C. Armentrout, M.D., Professor of Physiology in the Keokuk Medical School, February 7.

B. F. Spann, M.D., died February 2 suddenly of heart disease, at Anderson, Ind., aged 65 years. He was a prominent physician, and had held many State offices, and was at the time of his death one of the Trustees of the Indiana State Normal School. During the war he was appointed by Governor Morton to look after the sick and wounded Indiana soldiers in the hospitals at Nashville.

Deaths of Eminent Foreign Medical Men.—Dr. Krahmer, Professor of Pharmacology in the University of Halle. Dr. Mergit, formerly Professor of Medical Physics in the Bordeaux School of Medicine. Dr. Lellman, Professor of Chemistry in Giessen, from influenza, while in the prime of life. He was a pupil of Lothar Meyer, and was first Privat-Docent and afterwards Extraordinary, in Tubingen, which he only left in 1892 on his appointment to Giessen. His paper on the "Principles of Organic Synthesis," which was published in 1887, is well known amongst chemists.

James W. Pittinos, M.D., who died in Philadelphia on February 2, was one of the last representatives of a family identified with that city almost since its foundation. He was a graduate of the Philadelphia Medical College, and lectured on chemistry and materia medica. In the early days of the war he became connected with the Army Medical Corps, and spent four years in hard service, making quite a reputation as a surgeon. The Army Medical Museum at Washington gives evidence of the character of his service. In 1864 he had charge of the hospital at Camp Parole. He there contracted chronic bronchitis, which was ultimately the cause of his death. The past few years he has been out of practice entirely.

J. F. Hartigan, M. D., U. S. Consul at Trieste, Austria, formerly a resident of that city, died recently in Trieste. Dr. Hartigan was for many years Coroner's Physician for the District of Columbia, and was a member of the Grand Army of the Republic. He had yellow fever while a prisoner of war at Newbern, N. C., in 1864, and in 1888 was sent by Surgeon General Hamilton as an Inspector of the Marine Hospital Service to Florida towns to investigate their condition. In the performance of this duty, his health at no time robust gave way, and he was appointed Consul at Trieste, partly in the hope that the warm climate of that place would be beneficial to him. He had never given up the idea of returning to Washington and engaging in practice, and was on intimate terms with many members of the medical profession in Trieste. He had been for many years a member of the AMERICAN MEDICAL ASSOCIATION.

Robert Bentley, M.R.C.S., Eng., F.L.S., died on the 24th ult., at his residence in London, from pneumonia. After he became qualified he devoted himself to the study of botany and materia medica. In 1863 he was chosen Dean of the Faculty of Medicine at King's College, and continued in that position for twenty years. Botany was his favorite study, and he contributed many papers on this subject. He was intimately associated with the Pharmaceutical Society as Professor of Botany and Materia Medica, as a Fellow of the Linnean Society and a member of the Council, and as Vice-President of the Royal Botanic Society, before which for many years he delivered an annual course of lectures. Mr. Bentley's most important contributions to botanical science are his "Manual of Botany" and the "Medicinal Plants," published in collaboration with Dr. Trimeu. The former was first published in 1861, and it is distinguished from all other botanical text-books by the extent and value of its information on the economic products derived from the various natural orders, especially those connected with pharmacy. The "Medicinal Plants" was printed in four large octavo volumes, with colored plates, and will always be regarded an invaluable work of reference.

ASSOCIATION NEWS.

The Journal of the American Medical Association points out that it leads all the weeklies in the number of papers published, etc. The *Medical News* quotes the same figures to show that it is next, while the *Medical Record* thinks quality is better than quantity.—*American Lancet.*

Who Constitute the Membership of the American Medical Association?—It is widely claimed that the AMERICAN MEDICAL ASSOCIATION represents directly or indirectly every county in the United States, and that every grade of the profession is actually present at the annual meetings. We understand that its actual membership is just now over four thousand—we have not the exact figures at hand.

In a late issue of the *Railway Age*, our friend, Dr. R. Harvey Reed makes the statement that if there be abstracted from the profession the railway surgeons, the Army, Navy, and Marine Hospital surgeons, the insurance and pension examiners, the hospital staffs and "like distinguished personages," so few will remain that "it will require a military band to muster them close enough together to be seen with a fifth-objective microscope." According to this, the membership of the ASSOCIATION and the entire profession is practically composed of those holding distinguished offices of honor and profit.

We are told by Polk's Medical Directory of the United States that there are over a hundred thousand doctors in the United States, and we are rather staggered to be informed that aside from those holding official positions of honor or emolument, there are not enough doctors to occupy the field of a fifth-objective microscope. Our good friend informs us that the Code Committee of the ASSOCIATION is wrestling to determine whether the railway surgeon is entitled to honorable membership in that body. The source of his information he does not reveal, and we have no other knowledge concerning it. His point is that if the Committee finds the railway surgeons and their allies unworthy of membership, there will be no material left to form an ASSOCIATION. From the facts at hand it would seem as if there were many tens of thousands of doctors at present neither members of the bodies he mentions or of the ASSOCIATION. Certainly there would remain abundant material for a magnificent organization if every person in the profession holding an official position of any sort were transported to another land.

It is expected that the Committee referred to will report such a study of existing conditions surrounding the medical profession as will make it practicable for all honorable, educated physicians to work in greater harmony for the attainment of the best interests of the entire nation. . . . . —*American Lancet.*

Obstacles to Medical Ethics.—The Code of Medical Ethics is founded upon a so much higher principle than anything that has been offered by those physicians who are constantly making some attempt to induce the profession to disown it, that a fair-minded person can only conclude that they are endeavoring to lower it to a plane with themselves for the sake of personal aggrandizement. No one, not even the most extreme anti-Code man, can deny with an honest eye, that what disrespect is shown to the Code by the press and laity is due to the fact that its teachings are violated by the members of the profession themselves. The work is acknowledged to be a classic but, like all other just documents, it interferes with the practices of that class which cares little for the profession, except as an instrument to increase their own gains. While they have assailed openly the clause which relates to consultation, that is not the only one which they disregard at every opportunity. They attack the Code at what they consider its most vulnerable point, but if they

once broke through, sad havoc would be played with the grand old work. Unfortunately, a few monkeys have broken into the higher ranks of our profession and, emboldened by their temporary success, are endeavoring to teach us some antics. Knowing that our facial contour is not adaptable to the usual grimaces, they have begun with the somersault act. Some have taken to the trick quite naturally and have even commenced the facial distortion. But there is a majority in the medical profession that this doesn't suit, and they will never condescend nor submit to any such knavery.

We have always favored and labored for a united medical profession, but we now see that the warfare carried on by the anti-Code men is in an underhanded manner, they losing no opportunity to stab the upright members of the profession in the back and in dark places. Beaten on every occasion, they realize that they *can not* conform to fair and square laws and, with the determination born of despair, seek to do by stealth and secrecy what they see they can accomplish in no other way.

Knowing of this guerilla warfare, the members in good standing in the profession should meet it with military sternness. There are members of our profession in high standing who see that the Code is being violated, and feel that they are being injured by conforming to its teachings strictly, while giving the outlaws every advantage. They may say, as we have heard them, that in this way the Code works harm to the upright. We understand their feelings, but say that it is not the Code that does it but the men who violate that instrument. Here we have only to deal with those who are violating and endeavoring in every way to break down medical ethics, and suggest this manner. The homeopath is known by his sign, and for that reason is not in a position to do so much harm as the traitor. Then, as soon as these men become known, which must be sooner or later, brand them and place them with the goats. If they will not be governed by the laws of the profession, let them form into a body of their own and make laws to suit their own necessities. But in our dealings thereafter with them we should refuse to use the courtesy we do to our professional brethren, prescribed by the Code. Then they will have no advantage. It would soon be seen who had the best of the fight, and they would quickly cry for quarter or settle on a lower plane. The trouble with medical ethics has been not that the Code was wrong, but that its supporters have allowed themselves to be placed on the defensive, instead of carrying the war into the enemy's territory.

We have felt that their puny efforts would only hasten their own destruction, as like

> "The feeble sea-birds, blinded in the storms,
> On some tall lighthouse dash their little forms,
> And the rude granite scatters for its pains
> Those small deposits that were meant for brains.
> Yet the proud fabric in the morning sun
> Shines all unconscious of the mischief done;
> Still the red beacon pours its evening rays
> For the lost pilot with as full a blaze,
> Nay, shines all radiant o'er the scattered fleet
> Of gulls and boobies brainless at its feet."

But the matter is one of more seriousness. Corporations, in their crack at the balance of creation, have aimed a blow at the medical profession and seek on every occasion to batter down the breastworks furnished by the Code. Of course the means at their command have found those willing to serve their interests even at the sacrifice of professional courtesy to their brother practitioners, though the corporation physician expects on other occasions to have this courtesy extended to him. We are glad to say that there are some corporation physicians and surgeons who refuse to be dictated to by these officials, but we regret that the number is becoming gradually less. Where they do lose sight of professional courtesy to others they too should be branded and treated on all occasions with the same kind of medicine. We are strictly for the profession in this matter, and, if necessary, are willing to take up the cudgel and show who are derelict.

This is a question that has arisen since the Code was adopted, and needs some discussion and likely some alteration. A great part of the gall manifested by those who are fighting against medical ethics is instigated and shown in response to the patting on the back by these moneyed powers.

We will not deny that as new customs arise there may be occasion for changing, slightly, the Code, but this *must not be done* by its enemies. The name "anti-code men" may express their views, but medical anarchists is a more appropriate name, and the profession is not yet ready to accept anarchy.—*Medical Progress*, February.

SOCIETY NEWS.

Association of American Medical Colleges.

Meeting held at the Grand Pacific Hotel, Chicago, Wednesday Afternoon, Feb. 7, 1894.

[Reported exclusively for the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.]

Abstract of proceedings of the meeting of the Committee of the Association of American Medical Colleges, appointed to consider the practicability of adopting a four years course of medical study.

There were present, the following: Dr. Perry H. Millard of St. Paul, representing the University of Minnesota; Dr. E. L. Holmes of Chicago, Rush Medical College; Dr. Victor C. Vaughan of Ann Arbor, the University of Michigan; also Hon. Hermann Kiefer of Detroit, member of the Board of Regents; Dr. N. S. Davis, Jr. represented the Chicago Medical College; Dr. H. O. Walker of Detroit, Detroit Medical College; Dr. A. R. Baker, Medical Department University of Wooster, Cleveland, Ohio; Dr. John C. Shrader, University of Iowa; Dr. Flynn, Medical College of Indiana; Dr. Hall, College of Physicians and Surgeons, Minnesota; Dr. Marie J. Mergler, Woman's Medical College, Chicago; Dr. Wm. E. Quine of Chicago, College of Physicians and Surgeons; Dr. C. B. Stemen, Fort Wayne College of Medicine; Dr. P. S. Connor, Dandridge Miami Medical College, Cincinnati; Dr. Dudley S. Reynolds, Central University of Kentucky; Dr. Bayard Holmes of Chicago, and others.

The meeting was called to order by the Secretary of the Association, Dr. PERRY H. MILLARD of St. Paul, who said: A word in regard to the object of this meeting. As Secretary of this body, I received a communication on Dec. 10, 1893, from the Registrar of Rush Medical College, stating that at a Faculty meeting held Dec. 7, 1893, the Faculty by unanimous vote passed a resolution to the effect, that all students who begin their studies in 1895 with a view of graduating in 1899 will be required to attend four full courses of lectures in a medical college of not less than six months each. Providing that graduates of universities and colleges which give a suitable scientific course may be admitted to the second year in the medical college, and also that graduates from schools of pharmacy that require three years of study and an adequate preliminary education, and graduates of dental schools requiring two years of study and adequate preliminary education, will be admitted to the second year in the college.

The above resolution is an amendment to Section 5, Article 3, of the Constitution of the Association of American Medical Colleges. The present wording of Section 5, Article 3, of the Constitution, is as follows:

"Candidates for the degree of Doctor of Medicine shall have attended three courses of graded instruction of not less than six months each, in three separate years."

It will be observed that the adoption of the proposed amendment will require of all matriculates of 1895, an attendance upon four full courses of instruction before receiving the degree of M.D. As the result of this most important action by the Faculty of Rush Medical College, after consultation with the officers of the Association, it was deemed prudent to call together representatives of the College Association in conference, to decide whether we shall, at this time, with the submission of this amendment which is proposed by Rush Medical College, submit, at the meeting to be held in San Francisco, a minimum of curriculum suitable to a four years' course. It is recognized that our Constitution at present is defective. We really have no minimum requirements adapted to a three years' course. I find, likewise, as the result of a series of investigations conducted in the last year, that we have colleges, members of this Association, that are not living up even to our present requirements. I will say, however, that this is confined to very few schools, and schools that have not been heartily in sympathy with this Association since its organization. It was thought best not to call a special meeting of the College Association, because it would not be proper to take definite action upon our Constitution and By-Laws except at a regular meeting. What is done here to-day will be submitted in legal and proper form to the meeting to be held in San Francisco on June 6, of this year; and in appointing an informal committee and inviting you to meet with us to-day in conference, the chairmanship of this committee has been assigned to Dr. E. L. Holmes, who has taken an active part in this measure, and is a representative

of the school that has taken the initiative in the proposed amendment.

Dr. Holmes then took the chair. He said: I do not know that it is necessary for me to make any remarks introductory to the proceedings of this conference. The purposes have been set forth clearly by the Secretary, as well as by the published announcement in our various medical journals, and I presume the sooner we introduce and adopt a resolution bearing upon this subject, the more quickly will we finish our work. I would like to say, however, that while I am heartily in favor of the four years' course, and while I am in favor of the proposed minimum curriculum, we have found in our own college, in former times, that the plan of instruction for a four years' course is going to take one or two years for us to perfect. We can formulate certain definite ideas and live up to them, I think, but, at the same time, we are confronted with certain difficulties in arranging the courses of instruction properly for each year, so as not to bring confusion and to interfere with each other; so that the studies shall be carried on in such a way that at the end of the fourth year, students will not have forgotten what they have learned during the first year. That will necessitate a review of the studies, and we are planning courses of recitation by which every student as he passes through from year to year will have a review of what goes before. For instance, when a student has seen a certain number of cases of typhoid fever in the college clinics or hospital, as he studies them he will recite from the text-book, so that the text-book is not going to be a dry recitation for a person who knows nothing of the subject, but it will be needful for a student who is advanced, who has seen a sufficient number of cases to understand the general principles that he reviews in his recitation. He will be required to recite upon the anatomy of the parts involved, physiology, and materia medica, so that in this way we hope to devise a plan by which there will be a constant review of every organ, its anatomy, physiology and the remedies that are used in the treatment. Bnt we find certain difficulties in planning such a curriculum.

Then there is another point in regard to the minimum study required for the examination. I do not know as that comes in at all in this meeting, but we have found some difficulty in formulating a plan which every college can easily live up to. I will take no more of your time, but whatever you have to offer we will discuss.

Dr. N. S. Davis, Jr.—In the notices sent out, I believe there were a series of topics to be discussed, and I think it would be well to take them up, one by one, so as to cover the whole ground systematically.

Dr. Millard—In response to the circular-letter, sent out by myself, I have received information or advice from twenty-eight colleges in regard to their wishes or desires for the four years' course, and I can state definitely that twenty of these colleges are in favor of the adoption of the four years' course at this time, or at the San Francisco meeting, to be held in June next; that two colleges are endowed, and four or five colleges are opposed to it at this time, deeming it impracticable so shortly after adopting the three years' course, one college making the proposition that they will support it if we make it apply to 1896 instead of 1895.

In talking with Dr. N. S. Davis, Sr., the Chairman of the Association, it would seem that the program required by the Constitution would be about as follows: The proposed amendment already submitted to be official by Rush Medical College, would come before the Association for definite action in San Francisco in June. Now, the object of this conference to-day is to formulate a minimum of requirements, a course of study adapted to a four years' course, which would come before the Association as a separate amendment from the one submitted by Rush Medical College. At this conference, it is my opinion there are certain matters of great importance to the Association that should be acted upon. For instance, our By-Laws need immediate attention, and we should informally select a committee to re-arrange our By-Laws and submit them to the San Francisco meeting for adoption. The By-Laws governing the Judicial Council have not yet been acted upon definitely. The committee to be appointed at this conference can go over our present By-Laws and make such changes as may seem necessary to be submitted at the June meeting.

Dr. Vaughan—I desire to make a few general remarks before we get at the discussion proposed in the circular. It seems to me that we have reached a point in medical education in the United States, when those who have been engaged in it for a long while ought to be able to say what subjects should be embraced in the course of medical study. I find the greatest diversity in the various medical colleges regarding subjects that are taught, and others not taught. I do not see any need of having a four years' course unless we teach certain things. What shall we teach? What subjects must be taught in our schools by members of this Association? How shall those subjects be taught, and how much minimum time shall be given to them? Shall we teach bacteriology? Let us decide the question. If so, how shall we teach it? How long shall we teach it? In this way, it seems to me, we can get at something definite. We ought to know just what is necessary in order to fit a man for the practice of medicine. We have been teaching (some of us) a good many years, and we ought to be able to decide that question. I think it is the most important thing that can come before us. I hope to see the time when the best medical colleges in America will have practically the same curriculum, and that a student can take one semester in one college and get credit for that semester in going to another college, and take another semester if he wants to, and so on, and that he will not be compelled to spend three or four years at a given medical college. It seems to me that most of the curricula of medical colleges are now gotten up for the express purpose of compelling a student to stay there for the whole of his three or four years. I look upon this as being a little too narrow and beneath the dignity of the teachers of medicine in this country. In order to do that, we must agree upon what subjects must be taught and agree upon the minimum of teaching of those subjects, and how this minimum shall be taught. It seems to me the best method of getting to work this afternoon would be to decide what subjects shall be taught? I do not know, but I think that is the best way of getting at it. Then we can take up *how* long the subjects shall be taught, and *how* they shall be taught. As it now stands, we can not accept the year's work that a student has done in the University of Pennsylvania, for instance, because the work he has done there during his first year is entirely different from the first year's work he may do in some other college; as, for example, the medical department of the University of Michigan. During his four years, however, he may do just as good work as the students in our institution. There is no general plan upon which these curricula are laid out, and my idea is that this would be the best way of getting at it. The University of Pennsylvania begin teaching therapeutics the first year. We do not do that, and if a student, who has studied therapeutics the first year in the University of Pennsylvania, comes to the University of Michigan, we can not accept him because we do not consider him fit to study therapeutics, as he knows nothing about anatomy and physiology, and we think it is radically wrong. The teachers of the various medical colleges ought to be able to decide this point, which I think is of more importance than trying to compel all the colleges to have a four years' course. We should decide what subjects shall be taught and, if possible, when and how they shall be taught.

Dr. Reynolds—I regret very much that Dr. Vaughan has not submitted a curriculum embodying the ideas he has expressed. We have nothing to act upon. His remarks have been very clearly and wisely expressed, and I desire to indorse every word of them. It would have been better, however, if he had submitted them in writing so as to give us something to act upon.

Dr. Vaughan—The schedule of studies we have we think the best, but we are perfectly willing to be governed by the majority. There may be some changes made in the schedule. We teach during the first year in lectures and recitations in the first semester, osteology and descriptive anatomy, general chemistry and bacteriology; in the second semester, descriptive anatomy, physics, organic chemistry and histology; laboratory work the first year includes anatomy, chemistry and bacteriology. There might be some discussion as to whether these are the proper things to teach during the first year, and I am not altogether satisfied.

Dr. Reynolds—That is about what we teach, but we do not teach physics.

Dr. Vaughan—We accept the diplomas of students from reliable high schools. The physics taught in the majority of high schools is a failure. A student knows very little about the laws of refraction, of heat, light, magnetism, etc. We find that many of our students must have this instruction before they can study ophthalmology properly, and we give such instruction during the second semester of the first year. We do not compel all our students to take that course. Those who have had the proper course in the high schools, colleges and universities, are excluded from it. We find it impossible to teach ophthalmology successfully to the great

mass of students, who come to us, and more particularly to give them instruction in physics. I shall be glad to have the committee take up one of these subjects and discuss whether they should be taught, and in what way they should be taught. We may have some things that should not be taught at all, and others that should be taught at some other time and in some other way.

THE CHAIRMAN—If the gentlemen will excuse me for making some further remarks, I will say that what Dr. Vaughan has said, coincides with my own ideas. We find it difficult to arrange a curriculum of studies for different years. I think the same fault applies to the average high school in the West. When a boy leaves the high school, then works to get money to pay his tuition in a medical college he has forgotten what he has learned in physics, so that he can not state definitely the leading principles of a double convex lens on a ray of light: and so with hydrostatics, electricity, etc. I think it would be useful for us if we could formulate a plan of study and instruction by taking the four years' course that Ann Arbor has tried, and make such modifications as might be beneficial.

DR. MILLARD—To get the work in tangible form, I move that the entrance requirements, as now provided by the College Association, remain in force. These should come before us. Let us consider if we can make any change in the requirements. The subject of uniform entrance requirements is attracting considerable attention. I have received three communications from different Deans, and I have requested Dr. Quine, who is President of the Board of Health of this State, to give the matter some consideration and to submit something to-day. Seconded.

DR. WALKER—Will you please state the entrance requirements?

The Secretary then read from Article 3 of the Constitution of the Association of American Medical Colleges, the following:

SECTION 1.—Members of this Association shall require of all matriculates an English composition, in the handwriting of the applicant, of not less two hundred words; an examination by a Committee of the Faculty, or other lawfully constituted Board of Examiners, in higher arithmetic, algebra, elementary physics and Latin prose.

SEC. 2.—Graduates or matriculates of reputable colleges or high schools of the first grade, or normal schools established by State authorities or those who may have successfully passed the entrance examination provided by the statutes of the State of New York, may be exempt from the requirements enumerated in Section 1.

SEC. 3.—Students conditioned in the branches enumerated as requirements for matriculation, shall have time until the beginning of the second year to make up such deficiencies provided, however, that students who fail in any of the required branches in this second examination shall not be admitted to a second course.

DR. CONNOR—What is really meant by these requirements? Let us take, for instance, the subject of Latin. We require a certain amount of knowledge of Latin. There ought to be some indication as to what that amount really is. There is an enormous difference in this matter. There should be some definite statement as to what amount of knowledge is required, or how far the individual must have gone in his Latin study. So in regard to mathematics and algebra. The requirements, as I have understood them as read by the Secretary, are very indistinct, and they practically cover nothing. The trouble has been all the time since this question of requirements was first raised, that there has been no definite statement as to what is demanded. It is all well enough to say that a man must have a knowledge of this thing and that thing, but it is not an easy matter to say *how* much of the ground he shall cover. This not only relates to one, but to all of the subjects of preliminary examination. There are seventy-one colleges connected with this Association, and there are seventy-one different opinions as to what these requirements mean. There are colleges that have not lived up to the agreement, that are wilfully and persistently violating the requirements, and yet some of the members of those colleges belong to the Association and are going to vote for an increased curriculum. I know the increased requirements will not be lived up to, just as the requirements already demanded have not been lived up to. Let us adopt something definite.

DR. REYNOLDS—I am delighted to hear my neighbor, Dr. Connor, speak so plainly. Those of you who were present at Washington when the matter was discussed will doubtless remember how anxiously I tried to prevent the introduction of the Latin language, and the subjects which we have met to discuss this afternoon are of vital importance to the Association of American Medical Colleges. We are here to consider the practicability of extending the requirements to a four years' course of graded instruction. The preliminary requirements I regard as of secondary importance, for, as Dr. Connor has said, there will be great diversity of opinion in regard to them. I live in an atmosphere that enables me to breathe more freely and fully the varied sentiments of the profession on this subject than some of you gentlemen do, and I know that if the Association of American Medical Colleges at its forthcoming session should determine to require four courses of graded instruction instead of three, the so-called Southern Medical College Association will take a new life; it will acquire new membership from neighboring territory, and although its members are pledged to the adoption of the three years' course, they are not pledged to the adoption of the graded system. With about fifteen hundred medical students in Louisville, seven or eight hundred in Nashville, and something like that number in Atlanta and the Tulane University of New Orleans, which is one of the most magnificently equipped medical colleges in the world, not complying with our present exactions as yet, it seems to me very unwise to do anything which would tend to reduce our membership.

DR. SHRADER—In regard to the indefiniteness of some of the requirements which have been read by the Secretary, the Constitution says that students may be "conditioned in one or more of the branches enumerated as requirements for matriculation." Does that mean they will be conditioned in all of them?

DR. REYNOLDS—My understanding is that it means any one of them.

DR. SHRADER—I wish to say a word or two in regard to the extension of time. The medical department of the State University of Iowa has instructed me through its Faculty to report here that we are fully in accord with the advances that are being made, but we prefer to have this change made, that where colleges desire it, they may put in twenty-four months of study in three years, of eight months each, instead of extending the time to four years of six months each. Our collegiate year extends to about eight and one-half months, commencing the first of October and lasting until the middle of June. This is the sense of the Faculty, and I was so instructed to report at this meeting. We prefer to do this.

Medical students in the West have not any too much money to undergo four years of instruction, and it would cost them much less money to continue for two or three months longer the courses of lectures. They would save their traveling and other expenses. We can arrange our curriculum accordingly. Our Faculty is not quite ready to vote for a four years' course at this time, but it may be at the San Francisco meeting.

In regard to the preliminary requirements, we have found the same difficulty that has been pointed out by the preceding speakers. We appointed a committee of three on preliminary requirements, and no two of this number could agree as to how much Latin was required. Some time ago, in order to avoid diversity of opinion in this regard, we appointed an instructor in Latin, and a large number of our students took the Latin course, and it proved a very enthusiastic one. We believe that it has cleared up the matter of requirements of Latin, and we are in favor of retaining the instructor.

DR. WALKER—I belong to an institution whose faculty are in favor of adopting a four years' course, if other institutions are willing to do so. To extend the time to four years of six months each seems to me to be a waste of time. Send a student to a medical college for six months in a year, then let him leave, and in the majority of instances he forgets largely what he has already learned. If he takes such a course as is adopted by the University of Michigan—four years of nine months each—there is no such likelihood of his forgetting what he has previously learned. But the question arises, whether the medical colleges of this country are in a position to accept the proposed change. There are colleges connected with this Association, whose representatives come here and accept everything and even more, and go home and do nothing. That is the situation we are in. There is nothing compulsory about it. If we belong to this Association and adopt a four years' course of six or nine months each, as the case may be, and other institutions do the same, let us live up to it. The institution with which I am connected is progressive and is willing to do anything that this Association does, but we do not want to do anything that is suicidal. I am authorized to say that our col-

lege will do just what other institutions will do. Regarding the preliminary requirements, we have specified in our catalogue the amount of Latin we require; the same with botany, zoology, etc.

DR. QUINE—Mr. Chairman, I have not up to this time been able to discover what question, if any, is before the Association for consideration. Although the remarks that have been made have been highly interesting and instructive, it has seemed to me that they have been somewhat aimless. I agree fully with the sentiments expressed by the Secretary of this meeting, to the effect that the most important failing of all in respect to a medical education is to start right, and it seems to me important that this Association should settle the question of entrance requirements before it proceeds to the consideration of a minimum schedule of educational requirements. I am opposed to the entrance examination. I know it to be a sham; I know it to be an imposition upon the credulity of those who repose any faith in it. I believe that every medical teacher of experience can cite numerous instances wherein applicants for admission to one institution have been denied and have immediately thereafter gone to a neighboring institution and have triumphantly passed the entrance examination. I am in favor of abolishing the entrance examination; of taking it out of the hands of medical colleges altogether. I am in favor of requiring of every applicant for admission to a college that he present credentials equivalent in grade to a second grade teacher's certificate. If he have not such credentials at the time he presents himself to a medical college, let him go to the Superintendent of Schools and get such credentials. I may say in reference to this phase of the question that the Illinois State Board of Health has already adopted a requirement to this effect; that it has refused to recognize any entrance examinations conducted by any representative of any medical faculty; and it stipulates that every medical student who has a diploma or certificate from a recognized institution of learning shall present himself to some county superintendent of schools and sustain before that functionary a legalized examination to obtain a second grade teacher's certificate. If we have honest requirements, the adjustment of other medical questions will be in my opinion comparatively easy.

THE CHAIRMAN—The motion is, Shall the requirements, as laid down in the Constitution, be confirmed?

DR. VAUGHAN—I desire to offer a substitute, that we take up the requirements *seriatim* to see whether any changes are to be made or not. Seconded.

The Secretary accepted the substitute.

DR. VAUGHAN—I should dislike to see Dr. Quine's idea carried out. I know many medical colleges in this country that have not been influenced in conducting their preliminary examinations. Those colleges which are influenced in conducting such examinations are the sufferers themselves. There is nothing that can kill a medical college quicker than by accepting students who are unfit. Such colleges may thrive for a time, but in the long run they will suffer. While there are members of this Association that are not, perhaps, living up to the present requirements, so far as admission is concerned, they are the great sufferers themselves.

After further discussion on the requirements for admission, participated in by Drs. Reynolds, Connor, Stemen, Davis, Walker, Baker, Mergler, Bayard Holmes, Flynn and the Secretary, the Committee discussed Sections 1, 2 and 3, as laid down in the Constitution, and agreed upon the following pre-requisites to admission to the seventy-one colleges forming the Association:

1. English composition in own handwriting of not less than two hundred words, said composition to include spelling, punctuation, paragraphing and construction.

2. Examination in arithmetic, algebra through quadratics, and elementary physics.

3. Latin to the extent of one year's study, as indicated by Harkness' Latin reader.

4. Graduates or matriculates of reputable colleges and high schools of the first grade, or normal schools established by State authority, or who have successfully passed the examination provided by the State of New York, may be exempt from the requirements named.

5. Students deficient in one or more branches named as requirements shall have until the beginning of the second year to make up such deficiency, provided, however, that students who fail in any two of the requirements in this second examination shall not be admitted to the second course.

DR. QUINE offered the following resolution:

Resolved, That the management of entrance examinations and the determination of the value of the entrance credentials be intrusted to a committee of this Association, consisting of five members appointed by the Chair, which committee shall have the authority to arrange for entrance examinations in every city in which a medical college connected with this Association is located.

Seconded.

The above resolution, after being thoroughly discussed by Drs. Stemen, Connor, Vaughan, Bayard Holmes, Reynolds, Baker, the Secretary, Flynn and others, was lost.

DR. VAUGHAN then offered the following:

Resolved, That this committee recommend to the Association of American Medical Colleges at its next meeting in June, to be held in San Francisco, that no medical college shall be permitted to remain or become a member of the Association that does not provide, either for a three years' course of eight months study, or a four years' course of not less than six months each, to take effect in 1895.

Seconded by Dr. Walker and carried.

The Secretary moved that a committee of five be appointed to prepare a curriculum of studies, providing for the minimum of time and lectures to be devoted to each one, and that the committee report at the San Francisco meeting.

Seconded and carried.

The Chairman appointed on this committee Drs. Davis, Connor, Quine, Stemen and Vaughan.

There being no further business before the committee, the meeting adjourned.

Congress of American Physicians and Surgeons.—Preliminary program of the Congress of American Physicians and Surgeons, to be held in Washington, D. C., May 29, 30, 31, and June 1, 1894.

President.—Alfred L. Loomis, M.D., New York City.

Vice-Presidents, ex-officio.—Dr. George C. Harlan, President of the American Ophthalmological Society, Philadelphia, Pa.; Dr. Gorham Bacon, President of the American Otological Society, New York City; Dr. B. Sachs, President of the American Neurological Association, New York City; Dr. William T. Lusk, President of the American Gynecological Society, New York City; Dr. Robert B. Morison, President of the American Dermatological Association, Baltimore, Md.; Dr. D. Bryson Delavan, President of the American Laryngological Association, New York City; Dr. Andrew H. Smith, President of the American Climatological Association, New York City; Dr. Reginald H. Fitz, President of the Association of American Physicians, Boston, Mass.; Dr. George Chismore, President of the American Association of Genito-Urinary Surgeons, San Francisco, Cal.; Dr. A. M. Phelps, President of the American Orthopedic Association, New York City; Dr. Henry P. Bowditch, President of the American Physiological Society, Boston, Mass.; Dr. Harrison Allen, President of the Association of American Anatomists, Philadelphia, Pa.; Dr. J. Ewing Mears, President of the American Surgical Association, Philadelphia, Pa.

Chairman of the Executive Committee, Landon Carter Gray, M.D., New York City; Treasurer, John S. Billings, M.D., Washington, D. C.; Secretary, William H. Carmalt, M.D., New Haven, Conn.

PROGRAM.

The meetings of the Congress will all be held in Metzerott's Music Hall, corner of Twelfth and F Streets, N. W.

TUESDAY—MAY 29.

3 P.M.—Congress opened by the Chairman of the Executive Committee.

3:30 to 5 P.M.—General Session of the Congress under the direction of the Association of American Anatomists.

WEDNESDAY—MAY 30.

3 to 3:30 P.M.—General Session of the Congress under the direction of the American Climatological Association.

3:30 to 5 P.M.—General Session of the Congress under the direction of the American Dermatological Association.

7 P.M.—Dinner to the Guests of the Congress at the Arlington Hotel.

THURSDAY—MAY 31.

2 to 3:30 P.M.—General Session of the Congress under the direction of the American Association of Genito-Urinary Surgeons.

3:30 to 5 P.M.—General Session of the Congress under the direction of the American Gynecological Society.

7:30 P.M.—Address by the President of the Congress, Dr. Alfred L. Loomis, Professor of Pathology and the Practice of Medicine in the University of the City of New York, on The Influence of Animal Experimentation on Medical Science. To be followed by a Reception.

FRIDAY—JUNE 1.

1:30 P.M.—Business Meeting of the Congress.

2 to 3:30 P.M.—General Session of the Congress under the direction of the American Laryngological Association.

3:30 to 5 P.M.—General Session of the Congress under the direction of the American Neurological Association.

SUBJECTS FOR DISCUSSION.

By the Association of American Anatomists: "Morphology as a Factor in the Study of Disease." Opened with a paper by Dr. Harrison Allen of Philadelphia, and discussed by Dr. Thomas Dwight of Boston, Dr. Frederic H. Gerrish of Portland, Me., Dr. Frank Baker, Georgetown, and Dr. Burt C. Wilder of Ithaca, N. Y.

By the American Climatological Association: "Sewer Gas." The Bacteriology, by Dr. Alexander C. Abbott of Philadelphia. As a Cause of Disease, by Dr. Abraham Jacobi of New York City.

By the American Dermatological Association: "The Distribution and Control of Leprosy in the United States." The Distribution, opened with a paper by Dr. J. Nevins Hyde, Chicago, and discussed by Dr. Wm. A. Hardaway, St. Louis, and Dr. James E. Graham, Toronto, Canada. The Prophylaxis and Treatment, with a paper by Dr. James C. White, Boston, and discussed by Dr. Geo. H. Fox, New York City; Surgeon-General W. C. Wyman, U.S. M. H. Service, and Surgeon-General Joseph D. Bryant, New York City.

By the American Association of Genito-Urinary Surgeons: "Nephritis in its Surgical Aspects." Opened with a paper by Dr. Edward L. Keyes, New York City, followed by a paper from Dr. George M. Sternberg on "The Bacteriology of Nephritis," and discussed by Dr. Geo. Chismore, San Francisco, Cal.; Dr. L. Bolton Bangs, New York City; Dr. Francis S. Watson, Boston, Mass., and Dr. W. N. Wishard, Indianapolis, Ind.

By the American Gynecological Society: "The Conservative Surgery of the Female Pelvic Organs." Papers will be read by Dr. Wm. M. Polk, New York City, and Dr. Wm. Goodell, Philadelphia Pa.

By the American Laryngological Association: "The Surgery of the Accessory Sinuses of the Nose." To be discussed by Dr. F. H. Bosworth, New York, Dr. J. N. Mackenzie, Baltimore, Md., Dr. J. H. Bryan, Washington, D. C., Dr. J. G. Roe, Rochester, N. Y., and others.

By the American Neurological Association: "The Influence of Infectious Processes on the Nervous System." Pathology and Etiology, by Dr. James J. Putnam, Boston. The Relation to General Nervous Diseases, by Dr. E. C. Seguin, New York. The Relation to Mental Disease, by Dr. Charles K. Mills, Philadelphia; and The Therapeutics, by Dr. F. X. Dercum, Philadelphia.

New York State Medical Society.—The eighty-eighth session of the New York State Medical Society was held in Albany February 6, Dr. Herman Bendell of Albany, presiding.

Dr. Bendell asserted that the number of physicians in the State is increasing, while the number of quacks and those without education is decreasing.

He alluded to the change in apportionment and claimed all parts of the State should be fully represented. During the year there were 327 examinations of medical students; of these 267 were admitted. The State Medical Library should be enlarged. The principal part at present is the 5,000 presented by the Albany Medical College. The law of 1861 should be amended by making an appropriation of a sufficient amount to care for it. The President recommended the holding of every third meeting elsewhere than in Albany.

He named the prominent members of the Society who had died during the year: Dr. Hewitt, Dr. Johnson, Dr. Green, Dr. Douglass, Dr. White, Dr. Fordyce, Dr. Peters, Dr. Melius.

Dr. Eugene Beach presented a resolution that the Committee on Legislation are requested to take such action as they may deem necessary in obtaining such legislation as will tend to the restoration of medical control subject to proper State supervision; adopted.

Dr. Wey moved that the President's address be referred to Dr. W. W. Potter, Dr. L. Pitcher, Dr. Beach, Dr. C. R. Heaton and Dr. Brush; carried.

The following Board was appointed by the President to suggest the names of four persons to the Board of Regents from whom they shall select two to whom to grant a degree: Dr. D. B. St. John Roosa, A. Jacobi, A, Vanderveer, Dr. A. W. Suites, Dr. B. F. Sherman.

Dr. Fletcher thought the Society should name the Board. His remarks caused debate and he afterwards withdrew them.

Papers presented. It was decided to limit the reading of papers to twelve minutes. Several essays of interest to the profession were read and the Society adjourned until afternoon.

In the afternoon the following Nominating Committee was appointed: Dr. W. J. Morton, Joseph Hasbrouck, Dr. D. V. O'Leary, Dr. John E. Burdick, Dr. J. H. Glass, Dr. H. D. Whey, Dr. Albert L. Beahan, Dr. W. D. Eli and Dr. William H. Bailey.

Dr. Abraham Jacobi of New York, offered a resolution in regard to the office of Coroner. It advocated a certificate of graduation as practicing physician, as the necessary eligibility to a nomination. The resolution was adopted, after brief remarks.

Dr. M. J. Lewi, from the State Examining Board, read his annual report. It showed eight examinations during the past year, at which 326 candidates were examined. Two hundred and ninety-six possessed the necessary qualifications—being over 21 years of age, of good moral character and having completed a three years' course in a reputable medical college. Twenty were rejected. Under the existing laws, quacks are prevented from gaining any foothold in this State. The fees collected during the year were $245, and the expenses $7,800. Any attempt to reduce the examination fee from $25 to $5 would be a step towards nullifying the law. The committee had selected Dr. William C. Wey, President, and Dr. M. J. Lewi, Secretary, for the ensuing year.

Dr. D. B. St. John Roosa from the committee to select names to be sent to the Board of Regents, recommended the following: Dr. W. W. Potter, Buffalo; Dr. W. S. Ely, Rochester; Dr. M. J. Lewi, New York; Dr. J. W. Roosevelt, New York; Dr. E. Van Slyke, Albany; George C. Seymour, Utica; adopted.

Syracuse Academy of Medicine.—The Syracuse Academy of Medicine met February 6, Dr. H. D. Didama in the chair. Dr. John Van Duyn was to have presented a history of the Syracuse Medical Association of which the Academy is an outgrowth, but as he had not finished the paper he merely outlined its contents and will submit the finished history at a future meeting. It will be a comprehensive and thorough work and will be a valuable part of the archives of the new organization. Dr. J. C. Carson, Superintendent of the State Institute for Feeble-minded Children, presented a very interesting treatise on juvenile insanity, explaining the methods of treatment employed at the Institute. Dr. Gregory Doyle, gave some general observations on fractures and their treatment. He was followed by Dr. F. W. Marlow, Professor of Ophthalmology in the Medical College, who reported a number of cases of injury to the eyeball. Each of the papers was followed by a general discussion by the members. Dr. H. D. Didama, President of the Academy, made an address in which he spoke of the many benefits which are to come from the Academy and bespoke the hearty coöperation of all the members.

The following resolution was carried:

Moved that a committee of three be appointed by the chair to report at their convenience on the organization, methods and work of the City Board of Health with such reflections as they may see fit to make; that Dr. Donohue, on account of his position as President of the State Board of Health be chairman of this committee.

The chair appointed Drs. Donohue, Van Duyn and Halstead.

The Academy's room is now completely furnished, and a library has been started.

Rome, Ga., Medical Society.—The Rome (Ga.) Society of Medicine held its annual meeting January 31. The following officers were elected: Dr. H. H. Battey, President; Dr. W. A. Johnson, First Vice-President; Dr. J. N. Cheney, Second Vice-President; Dr. R. P. Cox, Secretary; Dr. L. P. Hammond, Treasurer. None of the old officers were reëlected.

Dr. Robert Battey was elected President of the Society when it was organized one year ago, and under his able administration it has prospered and accomplished a great deal of good. He was the unanimous choice of the Society for its highest officer this year, but owing to his pressing duties he was unable to accept and declined reëlection.

Denver and Arapahoe Medical Society.—At the fifth annual meeting of the Denver and Arapahoe Medical Society, Jan. 9, 1894, the following officers were elected for the ensuing year: President, Dr. Wm. P. Munn; Vice-President, Dr. I. B. Perkins; Recording Secretary, Dr. H. H. Bucknum; Reporting Secretary, Dr. Chas. H. Manley; Treasurer, Dr. E. J. Rothwell; Board of Censors, Drs. E. R. Axtell, W. J. Rothwell, J. N. Hall, Robt. Levy, J. C. Herrick.

Illinois State Medical Society.—The Executive Committee of the Illinois State Medical Society, held a meeting in Chicago February 14 for the purpose of perfecting the arrangements for the annual meeting of the Society to be held in Decatur, May 15, 16 and 17. The President, the Permanent Secretary, the Secretary of the Committee of Arrangements and the chairmen of the several committees were present

Jamestown, N. Y. Medical Society.—The Jamestown Medical Society met February 6. President William Marvin Bemus, M.D., was the host at a dinner which preceded. There were present, Dr. Laban Hazeltine, Dr. Morris N. Bemus, Dr. R. N. Blanchard, Dr. L. H. Snow, Dr. H. P. Hall, Dr. J. H. Wiggins, Dr. S. Z. Fisher, Dr. C. J. Phillips, Dr. E. C. Lyman, Dr. Mary Armstrong, Dr. J. W. Morris, Dr. Lundgren, Dr. Parks, Dr. Parker, Dr. Wellman, Dr. A. H. Bowers, Dr. Eastman, Dr. Sharpe of Lakewood and Dr. Smith of Falconer.

President Bemus made an address; and also Dr. Hazeltine. Before adjourning, the Society by vote acknowledged the hospitality of the President.

Corning Academy of Medicine.—The annual meeting of the Corning Academy of Medicine, New York, was held February 5. The session was spent in the discussion of a paper read by Dr. Carpenter. The following officers were elected for the ensuing year: President, Dr. H. M. Bourne; Vice-President, Dr. C. W. Hayt; Secretary and Treasurer, Dr. W. S. Cobb; Censors, Drs. Tillotson and Smith of Corning, and Carr of Caton.

MISCELLANY.

New Port Physician.—Dr. Walter D. Green has been appointed Port Physician of Philadelphia.

Dr. O. H. Fretz of Quakertown, has been appointed Clinical Assistant in the Eye Department of Jefferson Medical College, Philadelphia.

Typhus Fever.—A telegram of February 9, states that typhus fever in its most malignant form is prevailing at Sherwood, Iron County, Texas. If it is typhus fever it must have been brought from Mexico.

Professor Crile.—Dr. George W. Crile of Cleveland, has been appointed Professor of the Principles of Surgery by the Faculty of Wooster Medical College, and Dr. Fred. C. Taylor was elected Secretary.

Monument to Charcot.—Professor Brouardel has been elected chairman of the committee to collect subscriptions. M. Pasteur is the Honorary President of the committee. The sum of $600 has been collected by the *Progrès Medical*.

University of Utrecht.—Of a total of 800 students now on the register of the University of Utrecht, 326 belong to the medical faculty. In 1893 the degree of Doctor of Medicine was conferred on five candidates.

Dr. Lassar, the dermatologist, who, it will be remembered was General Secretary to the International Medical Congress in Berlin in 1890, has had the title of Professor conferred upon him.

Dr. Harrison Allen has been elected Professor of Laryngology and Rhinology; and Drs. A. L. Vansant and Walter J. Freeman, Adjunct Professors of Laryngology, in the Philadelphia Polyclinic. Prof. A. W. MacCoy will continue to give clinical instruction in the same branch, at the dispensary of the Pennsylvania Hospital.

Cholera.—On February 2 a cablegram from Berlin announced that on information received from Thom, a town near the frontier, that cholera was prevailing in two districts of Poland near the Prussian line, and another on the 9th, from Warsaw, stating that "there has been a recrudescence of cholera here and many deaths from the disease are occurring."

Germany's Doctors.—Germany, whose population is about 50,000,000, had 21,621 physicians in 1893, against 20,500 in 1892; that is, an increase of 1,521. That makes about 4.37 doctors for every 10,000 inhabitants, but they are not equally divided throughout the Empire; for in some regions there are not even two doctors for every 10,000 inhabitants, while in other districts there are 30 of them for the same number of population. Germany possesses also 915 dentists and 4,988 druggists.—*New York Tribune.*

Clinical Teaching in Spain.—As a good deal of dissatisfaction has from time to time been expressed by the Spanish medical journals and by students of medicine as to the inadequate provision for clinical instruction in the medical schools of the Peninsula, the Minister of Education has commissioned Dr. Amalio Gimeno, Professor in the Medical Faculty of the University of Madrid, Senator of Spain, and lately Inspector General of Public Health, to make an official inquiry into the matter.

Midwinter Fair.—The San Francisco *Chronicle* of January 28, in a magnificent number of thirty pages tells the story of the opening of the great Midwinter Fair. The scenes are very like those attending the similar exercises in Chicago at the opening of the World's Fair. Our readers will all have the opportunity of seeing the California way of conducting the Exposition by attending the next annual meeting of the AMERICAN MEDICAL ASSOCIATION June 5. The Fair will not close until July 1.

The Way of the Transgressor is Hard.—A press dispatch says: Barbrick and Richards, traveling specialists, advertised medical services and surgical treatment free. Consultation was free, but medicine came high, and they realized over $300. They have been arrested for obtaining money under false pretenses. Two hundred dollars was recovered. They hustled for their bill, and finally, after paying attorneys, officials, and refunding, they were permitted to go. They showed no diplomas. Inquiry at Cincinnati brought the information that they were not registered there as claimed. They are billed for other towns.

The New York National Guard.—The medical officers of the New York National Guard met at Albany February 7. The meeting was called to order by Surgeon-General Joseph D. Bryant, in the Armory of the Tenth Battalion, and was attended by about fifty medical officers of the Guard. An organization was formed for purposes of mutual advancement and for the improvement of the service. A constitution and by-laws was adopted, and Surgeon-General Bryant was chosen President ex-officio. The following officers were elected: Vice-Presidents, First Brigade, Major Daniel Stimson, Seventh Regiment; Second Brigade, Major William Spencer, Twenty-third Regiment; Third Brigade, Major Herman Bendel, Brigade Surgeon; Fourth Brigade, Major A. H. Briggs, Sixty-fifth Regiment; Secretary, Lieutenant D. S. Burr, Assistant Surgeon Twenty-sixth Separate Company; Treasurer, Col. Henry, Assistant Surgeon-General.

It is provided that each Vice-President is to be presiding officer of the association in his brigade.

Minnesota Lunatics.—It will be remembered that the Supreme Court of Minnesota recently decided in the Blaisdell case, that the law under which the insane in Minnesota have been committed to the State hospitals for the insane was unconstitutional, and steps will have to be at once taken to secure their re-commitment under the old law, either by action taken by the friends of the patient, the probate court of the county from whence they were committed, or this failing, by proceedings instituted by the hospital authorities in the probate court of the county where the hospital is situated.

According to the *Pioneer Press* of February 8: "The board of trustees after discussing all the serious phases of the situation, instructed the superintendent to notify the judges of probate of the respective counties, from which patients were committed, and the friends of the patients to come and remove them, and, in case of their refusal or neglect, to set the patients at liberty after a reasonable time.

Notification of Infectious Diseases.—It will be seen from the following taken from the Paris correspondence of the *Lancet* of January 20, that the French have finally adopted compulsory notification of infectious diseases. The forms are very guarded, and intended to cause as little friction between practitioner and patient as possible:

"*Compulsory Notification of Infectious Diseases 'un fait accompli' in France.*—On Dec. 30, 1893, there appeared in the *Journal Officiel* the Ministerial Decree fixing the list of infectious diseases that must henceforth, once the diagnosis is made, be reported to the authorities by Doctors of Medicine, *officiers de santé*, and *sages-femmes*. Postal cards will be supplied gratuitously to each practitioner. On the card must be filled in the name of the malady and precise directions regarding the situation of the infected premises. The declaration must be dated and a delicate provision is made enabling the practitioner to avoid direct mention of the name of the malady, which will be indicated only by a number (a list of maladies with their corresponding numbers is supplied on the first page of the *carnet*). The medical man is not obliged to sign his declaration, a number printed on each leaf of the *carnet* sufficing to distinguish his identity; nor need the name and address of the patient be filled in should the informant be able to give sufficiently explicit directions for finding the house infected. A small space is reserved in the declaration sheet for the (optional) mention by the medical attendant of the appropriate sanitary measures that should in his judgment be taken. In the country districts the declaration must be sent to the mayor of the commune and to the subprefect, in chief towns to the mayor of the arrondissement and to the prefect, and in Paris to the mayor of the arrondissement and to the prefect of police. Negotiations are now being conducted between the Minister of the Interior and the Minister of Commerce as to the free postage of the declarations. Each book supplied to practitioners will contain twenty double declaration forms. The list of declarable diseases is as follows: typhoid fever, typhus fever, smallpox and modified smallpox, scarlet fever, diphtheria (including croup), sweating sickness, cholera and choleraic diseases, pest, yellow fever, dysentery, puerperal fever (excepting when professional secrecy as to the existence of pregnancy has been claimed by the patient), and ophthalmia of the newly born. It will be noticed that measles, rubeola, chickenpox, mumps, scabies and ringworm are absent from the list."

Hospital Notes.

An Emergency Hospital has been established at Evanston, Ill.

St. Joseph's Hospital at St. Paul opened a training school for nurses February 1.

Dr. J. T. Duryea, Superintendent of the Flatbush L. I. Hospital for the Insane, has tendered his resignation to take effect February 28.

A Bill has been introduced in the Virginia Legislature providing for female physicians for the female patients in each asylum for the insane in the State.

The Memorial Hospital for Women and Children in Brooklyn was damaged by fire February 6. This hospital was occupying temporary quarters, on Prospect Place. The inmates were rescued with some difficulty, and several physicians aided the fire department in carrying the sick from the building. The loss is about $10,000.

Hospital Internes at Dinner.—The fifth annual meeting of the Alumni Association of the Internes of the Methodist Episcopal Hospital of Brooklyn, was held at the Montauk Club February 2. A dinner was served, and the meeting was afterward called to order by Dr. P. H. Sturgis, the President, who, after a few preliminary remarks, introduced the speakers of the evening. "The Alumni Association" was responded to by Dr. H. B. Delatour of the surgical staff; Dr. J. F. McCaw, late House Surgeon, responded to the toast, "The Younger Members; Dr. James P. Warbasse of the surgical staff, spoke upon "Forecasts;" Dr. H. P. De-Forest discoursed upon "Benedicts;" Dr. G. R. White spoke of the "M. E. H." from a New York standpoint; "Medicine versus Surgery," was responded to by Dr. A. D. Bogart, House Physician.

The following officers were elected for the ensuing year: President, Dr. J. P. Warbasse; Secretary and Treasurer, Dr James F. McCaw.

THE PUBLIC SERVICES.

Army Changes. Official list of changes in the stations and duties of officers serving in the Medical Department, U. S. Army, from February 3, 1894, to February 9, 1894.

Major ROBERT M. O'REILLY, Surgeon U. S. A., is granted leave of absence for two months, with permission to go beyond sea.

First Lieut. BENJAMIN BROOKE, Asst. Surgeon, is relieved from duty at Ft. Leavenworth, Kan., to take effect upon the arrival of First Lieut. WILLIAM H. WILSON, Asst. Surgeon, at that post, and ordered to Camp Pilot Butte, Wyo., for duty.

The following named officers of the Medical Department are relieved from duty in Washington, D. C., to take effect upon the completion of the present course of instruction at the Army Medical School, and are assigned to duty at the stations hereinafter designated: First Lieut. WILLIAM W. QUINTON, Asst. Surgeon, Ft. Riley, Kan.; First Lieut. THOMAS S. BRATTON, Asst. Surgeon, Ft. Niobrara, Neb.; First Lieut. DEANE C. HOWARD, Asst. Surgeon, Ft. Buford, N. Dak.; First Lieut. ALEXANDER S. PORTER, Asst. Suregon, Ft. Keogh, Mont.; First Lieut. WILLIAM H. WILSON, Asst. Surgeon, Ft. Leavenworth, Kan.

Navy Changes. Changes in the Medical Corps of the U. S. Navy for the week ending February 10, 1894.

Asst. Surgeon FRANK C. COOK, ordered to Naval Laboratory and Department of Instruction, New York.

LETTERS RECEIVED.

(**A**) Allan, H., Tacoma, Wash.

(**B**) Brooke, G. W., Ellsworth, Ohio; Bowman, A. H., Deadwood, S. D.; Ball, John & Sons, London, England; Bishop, S. S., Chicago, Ill.; Broome, G. W., St. Louis, Mo.; Brush, E. F., Mt. Vernon, N. Y.; Blose, J. W., Altoona, Pa.; Borck, Edward, St. Louis, Mo.; Bondurant, A. A., Cairo, Ill.

(**C**) Cochran, Jerome, Montgomery, Ala.; Cryer, M. H., Philadelphia, Pa.; Cleaves, M. A., New York City; Chambers, H. J., Denver, Col.; Coholan, M. J., New Britain, Conn.; Cooper, E. H., Galesburg, Ill.; Clark, Earl, Iowa City, Iowa.

(**D**) Diehl, C. Lewis, Louisville, Ky.; Drevet, The Mfg. Co., New York City; Dunglison, R. J., Philadelphia, Pa.; Deaver, J. Blair, Philadelphia, Pa.

(**F**) Farley, W. K., Waterman, Ill.

(**G**) Grubb, J. W., Galesburg, Ill.; Godfrey, F. H., Bloomington, Ill.; Gardner, R. W., New York City; Gibbons, J. E., Baltimore, Md.

(**H**) Hall, G. V., Wheatland, Texas; Hall, E. A., McCook, Neb.; Hawkins, Lucy, Springfield, Mo.; Herdman, W. J., Ann Arbor, Mich.

(**J**) Jones, Geo. W., Boulder, Col.; Johnson, L. O., Ann Arbor, Mich.

(**K**) Kirkland, R. J., Grand Rapids, Mich.; Kegan, Paul, Trench, Trübner & Co., London, England; Knight, C. H., New York City; Keiper, Geo. F., La Fayette, Ind.; Kirkley, C. A., Toledo, Ohio.; Kerr, J. P., Pittsburg, Pa.

(**L**) Lofland, W. A., Linden, Ind.; Lord & Thomas, Chicago, Ill.; Leland, Lena C., Rockford, Ill.

(**M**) McKelway, G. I., Philadelphia, Pa.; Montgomery, E.E., Philadelphia, Pa.; Mitchell, C. L., Fort Meade, Fla.; Marshall, T. E., Union City, Tenn.; Mason, D., Spokane, Wash.; Moore's Newspaper Subscription Agency, Brockport, N. Y.; Mackintosh, M. A., Paterson, N. J.; McBride, M. A., Leesville, Texas.

(**N**) Neer, H. C., Park Ridge, N. J.

(**O**) Owen, W. C., Newburg, Mo.; O'Neil, J. W., Chicago, Ill.

(**P**) Penfield, R. C., Philadelphia, Pa.; Perpoena Chemical Co., New York City; Putnam's, G. P. Sons, New York City.

(**Q**) Quin, R. A., Vicksburg, Miss.; Quine, W. E., Chicago, Ill.

(**R**) Rauch, J. R., Lebanon, Pa.; Rowley, J. F., Des Moines, Iowa; Rohr, Geo. W., Rockford, Ill.

(**S**) Stephens, Mrs. M. A., Minneapolis, Minn.; Smith, A. J., Galveston, Texas; Stuver, E., Rawlins, Wyo.; Schiller, L., Milwaukee, Wis.; Steele, D. A. K., Chicago, Ill.; Spring, N. W., Columbus, Ohio; Simmons, G. L., Sacramento, Cal., 2; Smith, W. S., St. Clair, Minn.; Smart, Chas., Washington, D. C.

(**T**) Turner, B. S., Chicago, Ill., 2,; Trueheart, P. P., Starling, Kan.; The A. Hawkins Co., New Orleans, La.; Tuttle, A. H., Cambridge, Mass.; Toner, J. M., Washington, D. C.; The Ruggles-Gale Co., Columbus, Ohio; The Troy Buggy Works Co., Troy, Ohio; The Western News Co., Chicago, Ill.

(**W**) Wick, D. M., Cedar Falls, Iowa; Weaver, W. G., Wilkesbarre, Pa.; Warner, J. W., New York City; Ward Brothers, Jacksonville, Ill.; Wilkenson, George, Omaha, Neb.; Wall, John P., Tampa, Fla.; Whetzel, F. F., Milwaukee, Wis.; Wood, E. N., Buchanan, Va.; Wenzlick, Wm., Chicago, Ill; Westermann, B. & Co., New York City.